THE FORTY-NINTH YEAR.

Companion to the Almanac;

OR,

YEAR-BOOK

OF

GENERAL INFORMATION

FOR

1876.

PART I.

GENERAL INFORMATION ON SUBJECTS OF ASTRONOMY, RAILWAY PROGRESS, FOOD PRESERVATION, THE NEWSPAPER PRESS, ARCTIC EXPLORATION, EDUCATION, AND LIBRARIES.

PART II.

ARCHITECTURE AND PUBLIC IMPROVEMENTS, PAINTING, MUSIC, PHILANTHROPY, LEGISLATION, STATISTICS, AND CHRONICLE OF 1874–75.

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PART I.

GENERAL INFORMATION ON SUBJECTS OF ASTRONOMY, RAILWAY PROGRESS, FOOD PRESERVATION, THE NEWSPAPER PRESS, ARCTIC EXPLORATION, EDUCATION, AND LIBRARIES.

SOME REMARKS ON NEBULÆ.

LAST year we offered a few remarks on stellar distances, and on the conjectures which have been put forth respecting the motions of the great sidereal universe, and the probable part taken therein by our own Sun and his accompanying "solar system," of which we form a part. We were led, in doing so, to speak of the recent demise of the great astronomer at Dorpat, Professor Mädler, whose speculations (the interest of which was greatly due to their being not mere conjectures, but founded on a careful and elaborate comparison of large numbers of observations) were more bold and far-reaching in that line than those of any of his contemporaries. And now, in entering a little into some of the researches of astronomers into the nature and appearances of those bodies coming under the general name of nebulæ (with special reference to the *history* of this branch of science), we have to express our regret at the loss of another, at a comparatively premature age—Professor D'Arrest, of Copenhagen—who, after receiving, in February last, the highest astronomical honorary guerdon, the Gold Medal of the Royal Astronomical Society for his excellent and extensive catalogues of nebulæ, from his own observations at Leipzig and Copenhagen, died somewhat suddenly on the 14th of June, 1875, in his fifty-third year.

During the course of the year which has just passed away, some very excellent series of observations of many of the nebulæ have been published, made by Dr. Herman Schultz, at the University Observatory of Upsala, in Sweden, and by Dr. Schönfeld, at that of Mannheim, from which place that skilful atronomer has lately been transferred to the fine Observatory established some years ago by the Prussian Government at Bonn, as successor to the famous Professor Argelander, who presided over it until his death, on the 17th of last February, at the ripe age of nearly seventy-six.

All these labours, combined too with the marvellous results

which have been obtained in recent years by that new engine of astronomical discovery, the spectroscope, are opening out to us by degrees the means of attaining an insight into the nature and probable position in the stellar universe of the nebulæ. This, we need hardly remark, has long been one of the most interesting problems of astronomy. Of course, in a brief article like the present, we cannot do more than rapidly survey some of the steps by which this department of the science has risen to its present importance.

It is well known that nebular astronomy was for many years (to use the expression of Dr. Schultz, in the treatise we have just referred to) a kind of Herschelian science, so assiduously, and almost exclusively had it been cultivated by the two Herschels; in illustration of which, we are glad to acknowledge our obligations in this paper to the elaborate address of Mr. (now Sir George) Airy, then recently appointed Astronomer Royal, on presentation of the Astronomical Society's Gold Medal in February, 1836, to Sir John Herschel, for his "Catalogue of Nebulæ and Clusters of Stars," printed in the "Philosophical Transactions for 1833." He began by remarking, that telescopic discovery, when applied to the planets, exhibited to us bodies analogous in very many respects to our own earth; and everything leads us to conclude that they are bodies of the same order; that, with specific differences, there is a generic resemblance; that the circumstances of formation, which have bound all in one mechanical system respecting the Sun as the principal seat of force, have also impressed upon all one physical system, as testified by the similar arrangement of subordinate bodies, and the probable resemblance of their gaseous as well as their solid parts.

In the study of the fixed stars, too, we find striking analogies with our own Sun, of the physical constitution of which spectrum analysis has taught us in the last quarter of a century much which could not have been conceived possible when the address just quoted was delivered. Nor can any one who has devoted much attention to astronomy resist the conclusion, as highly probable, that the stars are in fact suns, and form the centres of other solar systems, many at least of the members of which may be capable of sustaining, like our globe and perhaps several of its sister planets, life and intelligence, and contain beings with capacities to understand and admire some part of the works of the great Architect of this magnificent universe of moving bodies.

When, however, we come to study those diverse bodies, or masses of matter, to which the generic name of nebulæ has been given, from a certain degree of similarity of outward general appearance, we seem to have lost the aid of analogy with our own system. Many, indeed, have been resolved by high telescopic power into discrete entities, and resemble an ordinary cluster of stars, as seen under a lower power; but, as Sir G. Airy remarks in the above-mentioned paper, "far more striking

is the irresolvability of others, whose magnitude seems to imply comparative nearness, which nevertheless defy our telescopes, and whose general appearance seems obviously to contradict the notion of consisting of groups of stars. Among the most remarkable of these, I may mention the two most conspicuous—those of Andromeda and Orion. No one, I think, who has seen these in a telescope of great light—the one like a lamp shining through a homogeneous fog, the other like a pile of cumuli-clouds tossed together in the same capricious manner in which we see them in our summer skies—can persuade himself that these can be anything but masses of nebulous matter, the causes and the laws of whose arrangement we should vainly endeavour to detect."

The two remarkable nebulæ here referred to were the first ever discovered. That in Andromeda (near the star ν in that constellation) is indeed just visible to the naked eye, and it cannot be said with certainty when it was first seen, though it was first examined with a telescope on the 15th of December, 1612, by Simon Marius, who was at the time uncertain whether it had ever been noticed before. That astronomer, whose real name was Mayr, and who, after studying astronomy under the famous Tycho Brahe at Prague, was appointed astronomer to the Margrave George Frederick of Brandenburg-Anspach (at which place he died in 1624), likened the nebula in question to the appearance of a candle shining through horn—a not unapt resemblance. "Its form," to use the words of Sir John Herschel, "as seen through ordinary telescopes, is a pretty long oval, increasing by insensible gradations of brightness, at first very gradually, but at last more rapidly, up to a central point, which, though very much brighter than the rest, is decidedly not a star, but nebula of the same general character with the rest, in a state of extreme condensation." The still more remarkable nebula in Orion was discovered by Huygens, and described in his book, "Systema Saturnium," published in 1659. It has been called the "fish-mouth" nebula, and has a curious resemblance to the jaws of some great monster of the deep. The principal part of it surrounds the star θ in the sword of Orion, but parts extend beyond the stars on either side, the whole area being very great—so much so, that if the distance of the nebula be no greater than that of the nearest fixed stars, its breadth must exceed a hundred times that of the Earth's orbit. Huygens's first description of this extraordinary object is as follows:—"Portentum, cui certe simile aliud nusquam apud reliquas fixas potuit animadverti." The more and more powerful telescopes which have been turned upon it since his discovery (although the nebula is visible to the naked eye, there is no record of its having been seen by any one before Huygens) have increased its relative as well as absolute interest, and his expression remains still applicable. Convolutions and wreaths of nebulous matter apparently connected with it have been discovered by the large object glasses used in recent years. Sir John

Herschel compared it "to a curdling liquid or a surface strewed over with flocks of wool, or to the breaking up of a mackerel sky, when the clouds of which it consists begin to assume a cirrous appearance." Several variable stars have been detected in the most central part of the nebula; and it was indeed the fact of the frequent apparent connection of the nebulæ with stars of different, and often of variable, brightness, which first shook the theory long held, but subsequently abandoned even by Sir William Herschel, that the nebulæ generally were simply star-clusters at enormously greater distances than ordinary fixed stars. No doubt this is true of many of them, and increase in the light-collecting power of telescopes has resolved into stars many objects coming under the designation of nebulæ, as the 20-foot reflector of that pre-eminent star observer had done with the Milky Way about the year 1782, when his truly splendid series of observations of the fixed stars commenced. But of many others, such an idea could scarcely be entertained; and if it could, it has been utterly dissipated by the revelations of the spectroscope, which, in the hands, first of Kirchhoff, and afterwards of Huggins, Miller, and others, has enabled us almost to construct a new science by the observation of the fixed lines in the prismatic spectrum—lines, some of which were first seen by Wollaston, without any suspicion of the wonderful results they would lead to after the lapse of more than half a century. To our distinguished countryman, Dr. Huggins, is due the first application of this new method of analysis to the nebulæ about ten years ago. On examining the spectrum of a small and comparatively bright nebula in the constellation Draco, he was much surprised "to perceive that there was no appearance of a band of coloured light, such as a star would give, but, in place of this, there were three isolated *bright lines* only." Such a spectrum could be produced only by light which had emanated from matter in a gaseous condition, so that the light of the nebula must have proceeded, not from incandescent solid or liquid matter, like that from the sun and stars, but from *glowing or luminous gas.* A more exact examination of the position of these bright lines proved the existence of both nitrogen and hydrogen gas in this nebula. Several more of these objects were subsequently examined, with a similar result; and in the winter of 1864–5, Dr. Huggins turned his spectroscope upon the great nebula in Orion, and found the spectrum to contain three bright lines, without any indication whatever of the existence of a continuous spectrum, such as would be produced by light emanating from incandescent solid or liquid matter. This extraordinary body would seem therefore to consist wholly of luminous gas, and any previous suspicion of part of it being resolvable into stellar points, was probably rather due to greater condensation of masses of the gaseous matter in certain parts, giving the idea of separate points of light. Some of the other nebulæ and notably the remarkable one in Andromeda already referred to, have however been found to give a

faint continuous spectrum, though they have failed to exhibit any trace of resolvability, even when seen with the most powerful telescopes. Probably, in these cases, we must endorse the view of Dr. Huggins, that they "are not clusters of stars, but gaseous nebulæ, which by the gradual loss of heat, or the influence of other forces, have become crowded with more condensed and opaque portions."

But, at any rate, the conclusion is forced upon us, that at least a considerable proportion of the nebulæ are composed of matter in a very different state from that of which the stars are constituted; and consist, in fact, wholly or principally of gaseous material. Hence, the theory that these are star-clusters at immensely greater distances than the Milky Way has no solid ground to rest upon. It has become therefore a question of the highest astronomical interest to endeavour to ascertain the actual distance of some of these true nebulæ from the solar system.

Now, in our paper last year on Stellar Distances, we gave a brief account of how the problem, long considered insoluble, of determining the distances of some of the fixed stars, received at last an approximate solution about forty years ago, Bessel being the first to establish a measurable parallax of the little star 61 Cygni; and those of several other stars were afterwards satisfactorily determined with different degrees of accuracy, the nearest of all being the bright star, α Centauri, in the southern hemisphere, the distance of which from us is about twenty billions of miles, or such as it would take light 3½ years to traverse. Such determinations can only result from a number of observations made with the utmost skill and precision by the aid of the beautiful instrumental appliances which modern mechanicians have placed within our reach. At the celebration of the bicentenary of the foundation of the Royal Observatory, Greenwich, which was held on the 10th of last August, Sir George Airy remarked that the true epoch of accurate astronomical observing was the manufacture of really accurate clocks* by the famous George Graham. A similar remark may be made of several of our great astronomical instrument makers (of whom Graham himself was one, as well as the father of clockmakers). To the improvements effected by them are, of course, largely due the wonderful discoveries made by astronomers of late years, availing themselves both of these means and of the increasing aid afforded them by modern mathematics, and applying these resources with the sagacity which long and persevering philosophic thought had given them. In this way the rich heritage of scientific knowledge handed down by one age to another, is again handed on with ever richer and nobler accretions; and the insoluble problems of one generation it becomes the privilege and delight of another to solve with more and more fulness and approach to a never-actually-reached com-

* Without such, it was impossible to observe the element of right ascension directly, and the method of measuring distances (particularly unsatisfactory for the sun) between different celestial objects had to be employed.

pletion. That of ascertaining the distance of some fixed stars has been accomplished; that of finding those of the nearest nebulæ is still a desideratum. The attempt is beset with difficulties of its own, as a little consideration will show.

In order to determine either the parallax or proper motion of a distant object, it is necessary to obtain some really accurate observations of it, separated from each other by a considerable interval of time. Now, with modern appliances, the determination of the co-ordinates of a fixed star within a fraction of a second of arc presents no difficulty not surmountable by patience and skill; and as long as there is a distinct stellar point to be observed, the difficulty is not increased by the mere fact of the greater faintness of the star; though of course its position amongst other stars is a matter of importance, as the method of comparison with their places presents considerable advantages. But a faint star, when observed under favourable conditions of weather, so that its stellar point is distinctly recognizable, is even easier to observe accurately than a very bright star. When, however, the question is about determining the right ascension and declination of a nebulous patch of light, the matter assumes a very different aspect, and the difference is similar to that between observing with precision the place of a planet and of a comet.

Sir William Herschel's attention was not much given to accurate determinations of place, but his observations of nebulæ were concerned chiefly with what may be called their natural history and physical appearances. He considered that the errors even of his later measurements of position might amount to $1\frac{1}{2}$ minute of space in right ascension, and from $1\frac{1}{2}$ to 2 minutes in declination; and the errors of his early observations (before the year 1785) were probably even greater than these. The accuracy obtained by Sir John Herschel, both in his Cape and in his northern observations, was considerably greater than that attempted by his father; and he estimated that the error seldom exceeded about half a minute of space. It is obvious, however, that this improved accuracy is nothing like sufficient to found conclusions upon concerning the proper motions or distances of the nebulæ, unless the places could be compared with other observations made at a very great interval of time. Of all the fixed stars of which determinations of proper motion have been made, the largest (and that considerably larger than any other) amounts to only about 7″ of a great circle annually; so that it would require about 50 years to move through 6 minutes of space in the celestial sphere, as seen from the earth.

"M. Laugier was the first" (we are now quoting from the interesting address of Professor Adams last February to the Astronomical Society) "who attempted to determine the places of certain selected nebulæ with much greater precision than is attained in Sir John Herschel's Catalogues, in order that they might furnish a secure foundation to future investigations

respecting proper motion. In the 'Comptes Rendus' of December 12, 1853, he gives* a Catalogue of the places of 53 nebulæ for the beginning of 1850, selecting such as had well-defined centres or points of greatest brilliancy. It is to be regretted that no details are given respecting either the number of observations in which the places in the Catalogue are founded, the mode of observation, or the telescope employed, so that the Catalogue itself affords us no means of judging of the degree of accuracy of the places contained in it."

Professor D'Arrest commenced at Leipzig, in 1855, a series of observations of nebulæ with the express purpose of determining their places with exactness, and thereby giving the means of afterwards deducing the proper motions of some of them. And he found that in a large proportion of these objects, particularly of the small nebulæ of Herschel, mostly round or elliptical in shape, there was a sufficient amount of central condensation (frequently offering a nucleus almost stellar in appearance) to enable him to determine the place, by a few comparisons with neighbouring stars, within 4 or 5 seconds of space in each co-ordinate. Other astronomers have followed up the work thus so ably begun by Prof. D'Arrest; and amongst these we have already mentioned M. Schönfeld and Dr. Schultz, whose observations, made with the greatest care and attention to all circumstances calculated to ensure precision, have furnished us with a hopeful prospect of ultimately acquiring a knowledge of the motions and real positions of some of the nebulæ, which it once seemed impracticable to obtain. Dr. Schultz's contribution (which is not likely to be his last as well as first) was published at Upsala in 1874, under the title of "Micrometrical Observations of 500 Nebulæ," and, though written by a Swede in Sweden, he has set the example in it of using the *English* language, which of course every Englishman at least would wish to see largely followed, and which many scientific men of other nationalities would doubtless prefer to a Scandinavian tongue, or even to the Latin, so much used by our forefathers, and almost consecrated in the Novum Organon and Principia. It is interesting to refer to his testimony to the value of Prof. D'Arrest's earlier Leipzig observations of nebulæ. "D'Arrest," he says, "has done especial service to this study by showing that, when what is required is simply good determinations of positions, a much greater number of nebulæ than has been usually supposed may be advantageously observed with instruments of but very moderate dimensions. But his series of observations is chiefly and especially important as proving beyond the possibility of a doubt that the positions of nebulæ in general are determinable with far greater accuracy than it had been previously usual to suppose; and D'Arrest's work thus made an epoch in the study of nebulæ by freeing it from the deterring prestige which had before that period been attached to it."

* M. Laugier died on April 5, 1872.

In the year 1857 D'Arrest removed to Copenhagen as Professor of Astronomy and Director of the Observatory, which in 1861 was provided with a magnificent refractor by Merz, of 15 feet focal length, and 10½ French inches in aperture of object-glass. With this fine instrument he enlarged his scheme of operations, and commenced a survey of all the observable nebulæ with the utmost accuracy attainable. In 1867 he published a splendid volume of results thus obtained under the title of "Siderum Nebulosorum Observationes Havnienses," containing about 4,000 positions of 1,942 of the nebulæ (several of which were new discoveries). In this survey he confined himself as far as possible to true nebulæ, leaving out those objects which were evidently clusters of distant stars. Meanwhile two very valuable contributions to this part of astronomy had appeared in England: Lord Rosse's description of about 800 nebulæ, as observed with his 6-foot speculum, published in the "Philosophical Transactions" for 1861; and Sir John Herschel's general Catalogue of all known nebulæ (then 5,063 in number), which appeared in the "Transactions" for 1864, and is of the greatest use in enabling astronomers to know whether any nebula seen is or is not a new discovery. In addition to this, the spectroscopic observers of nebulæ have not been idle, and the spectra of about 140 have now been examined, a considerable proportion of which are found to be of gaseous constitution. Prof. D'Arrest himself took part in these investigations, and noticed the interesting fact that almost all the gaseous nebulæ are situated either within or on the borders of the Milky Way, whilst the regions near the poles of that wonderful band are destitute of this class of nebulæ, though containing large numbers of others—a fact (noticed also by others) which may become of great future significance.

Thus is the foundation being laid on a broad basis for, in all probability, a rich harvest of future discoveries. At present, it is premature to speculate much on the result; though it is right to mention that one satisfactory determination of proper motion of a nebula has been made from the fact that it was observed as a star, by Lalande, in 1790, and its appearance (it is a so-called *planetary* nebula, numbered 4373 in Sir J. Herschel's Catalogue) enabling it with fair accuracy to be so observed. On comparing its place, then, with that deduced from the careful recent observations of D'Arrest and Schönfeld, it was found that its proper motion was quite insensible during that interval. But, of course, from one such determination no general conclusion can be drawn, since the motion of that particular nebula may be directly in the line of sight. Probably, before another generation of astronomers shall have passed away, the position of this branch of their science will be very different, and much information, of a new and hitherto unsuspected kind, be acquired.

We cannot quit the subject without a few more words on its general earlier history and the epochs in its discovery, though, of

course, anything like detail is incompatible with the limits of the present article.

The earliest catalogue of nebulæ was that of La Caille, formed from his observations of forty-two of them, made at the Cape of Good Hope, and published in 1755, besides which, Le Gentil, about the same time, gave a description of a few of the most remarkable ones, including those of Andromeda and Orion, before referred to. It was Messier, however, who formed a list of these objects, which was the principal authority in respect to them, before they passed so almost exclusively into the revolutionizing hands of the Herschels. Messier, who had been for some time assistant to Delisle, and died at Paris in 1817, at the age of 87, recorded the places in the constellations of 103 nebulæ, observed chiefly by himself (a few by M. Méchain), at a temporary observatory in the Hôtel de Clugni, Rue des Mathurins, Paris; and his list was published in the "Connaissance des Temps," for 1784. As a specimen of his descriptions, we will quote that of his 13th number, of which he says, after giving its approximate right ascension and declination :—"Nébuleuse sans étoile, découverte dans la ceinture d'Hercule ; elle est ronde et brillante, le centre plus clair que les bords, on l'aperçoit avec une lunette d'un pied ; elle est près de deux étoiles, l'un et l'autre de la huitième grandeur, l'un au dessus et l'autre au dessous : la nébuleuse a été déterminée en la comparant à ϵ d'Hercule. Vue par Halley en 1714. Revue les 5 et 30 Janvier 1781."

It was shortly after this latter date that Sir William Herschel commenced his splendid series of observations, and it was indeed Messier's Catalogue that first led him to devote especial attention to the nebulæ. The first of his series of papers appeared in the "Philosophical Transactions" for 1784, and they continued to form (in Sir George Airy's words) "the most splendid and interesting parts" of the various volumes of that important serial until their great author's death, which occurred on the 25th of August, 1822, very shortly after the formation of the Royal Astronomical Society of London, of which he had been elected the first President. The father's mantle, however, fell upon the son, and, in 1826, one of the earliest memoirs of that society contained an account of the great nebulæ of Andromeda and Orion, by Mr. (afterwards Sir John) Herschel, who, for many years after that time, devoted a large portion of his energies to the examination of nebulæ. A great number of these were, of course, the same which had been previously observed by his father; but many peculiarities in them were described which had not been noticed by Sir William, and about 500 new nebulæ were discovered. Anxious to include also the southern hemisphere in his survey, Sir John Herschel removed to the Cape of Good Hope, about the end of 1833 (arriving there on the 15th of January, 1834), and, after selecting Feldhausen as his station, spent four years in making a magnificent series of observations of nebulæ and other remarkable celestial objects, with the same

instrumental apparatus which he had used in England. The results of these were communicated to the scientific world in the year 1847, in a quarto volume, replete with matter of the highest interest. Perhaps one of the special advantages gained by his southern position was the opportunity it afforded of studying the nature of those extraordinary objects called the Nubeculæ, or Magellanic clouds, careful observation of which may be said to have first overthrown the idea of nebulæ being, in all cases, star-clusters at too great a distance to be seen separated by the telescopes as yet employed upon them. For these, which are conspicuously visible to the naked eye, as two round or rather oval (the "major" is more oval than the "minor") masses of light, resembling patches of the Milky Way, when examined with a powerful telescope, are found to contain both clusters of stars and tracts of nebulosity in every stage of resolvability, besides nebulæ proper and nebulous objects of peculiar character, all concentrated and wedged together in these two small areas, in such a way as utterly to preclude the idea of their being situated at vastly different *proportional* distances from us.

When spectrum analysis was applied to the nebulæ, as mentioned before, the practical difficulties were great, on account of the faintness of the light. By perseverance, however, and care the lines in the spectra of a considerable number have been observed, and their positions measured—first, by Dr. Huggins, and afterwards by others. On the whole, it may be stated as a general result, that those nebulæ which had been thought the least likely to be resolvable were, in fact, found to be of gaseous constitution. A fresh and startling impetus has thus been given to the study of these so long enigmatical objects (and which, in many respects, continue still to be so), and, as we have stated at the outset, the recent careful observations made of them, attaining a degree of accuracy before thought unattainable, are at last affording us hopes of learning something about their actual motions, and perhaps, ultimately, even of their approximate distances from us. It is obvious that reliable acquisitions of knowledge of this kind cannot fail to imply most interesting additions to that acquaintance with the universe beyond man's own comparatively diminutive dwelling-place, which it has been the special privilege of astronomy to afford him. That so much has been achieved may well excite our wonder, whilst it speaks, in no doubtful language, of our belonging to a larger part of the universe of God than that to which our present labours and excursions, though not our thoughts, are confined. Our birthright, then, is to use the powers which the Creator has given us to study His works in other provinces of creation; and our gratitude for the gift of those powers is best shown by using them to the very uttermost.

W. T. Lynn.

THE RAILWAYS OF THE WORLD.

It is becoming more and more difficult to treat this subject within anything like a limited compass. So rapidly are nations in a half-developed state of civilization availing themselves of the advantages of steam-locomotion ; so greatly does the mileage of railway in the principal countries increase year by year ; so wonderful are the engineering achievements in piercing mountain chains, crossing broad rivers and deep ravines, and tunnelling beneath the waters ; so gigantic is the amount of capital invested in these undertakings ; so extensively does the opening of additional railways develope the industrial and commercial resources of all the regions of the earth—that railway travel touches almost every interest to which human thought is directed. We can only attempt, therefore, to give a cursory glance at the salient features of the subject, in the various countries of the globe.

The United Kingdom.—The extension of railways in the United Kingdom has been steady and unceasing since 1825, when the Stockton and Darlington line virtually commenced the system. At one time an opinion prevailed that the network was nearly complete, that all our principal towns were supplied with railway stations, and that enterprise might well stay its hand in this direction. This opinion arose from a twofold error. Those who held it overlooked the fact that towns of all grades, small as well as great, crave the advantages of rapid, cheap, and frequent intercommunication with the metropolis and other large centres of population ; while they also failed to see that the several railway companies, however they may grasp at monopoly through the medium of amalgamations, leasings, and working agreements, do nevertheless maintain a rivalry which is beneficial to the public. If a second or third rate market town is still unvisited by the locomotive, the nearest company has an incentive to occupy it—not for the actual profit thence derivable, and certainly not through a benevolent sentiment towards the inhabitants, but under the influence of a wish to keep out rivals from a district where they might possibly be troublesome. We have not yet come to the end of our railway branches and extensions, nor are we likely to do so.

The amount of legislation connected with the railways of the United Kingdom has been almost incredibly large. Even twenty years ago there had been no less than 1,140 separate and distinct Acts of Parliament passed relating to railways ; and every subsequent year has added considerably to the number. The mileage of lines sanctioned by these several statutes greatly exceeds the mileage actually constructed ; because many speculative companies, after obtaining their Act or Acts, failed in the attempt to obtain the capital necessary for carrying on the works ; as a consequence, the parliamentary sanction became a dead letter. Setting aside these abortive schemes, and confining our attention to railways actually constructed, we will present

in a tabular form some particulars of this gigantic system, commencing with 1854, and comparing it with later years :—

Years.	Mileage.	Cost.	Passengers.
		£	
1854	8,054	286,068,794	111,206,707
1859	10,002	334,362,928	149,807,148
1864	12,789	425,719,613	229,348,664
1869	15 145	518,779,761	312,779,381
1873	16,082	588,320,308	455,634,767

The years 1869 and 1870, for some unexplained reason, are tabulated by the Board of Trade in reference to the miles of railway *constructed*, not those *open*, the two being in all cases somewhat discrepant. The stupendous sums of money above named represent the actual capital received by all the companies, in shares and loans of every kind, at the dates named ; although the items are not quite identical with the total cost, they approximate sufficiently near to it for purposes of comparison. The passengers, it will be perceived, increased in numbers without any break or exception, each and every year being higher than that which preceded it ; this was a natural result of the increase of mileage. The following table will give other particulars of an instructive kind, the term net receipts being applied to profit after paying working expenses, &c. :—

Years.	Passengers per mile.	Gross receipts.	Gross receipts per mile.	Net receipts.
		£	£	£
1854	13,807	20,215,724	2,510	11,009,519
1859	14,980	25,743,502	2,573	(not stated)
1864	17,933	33,911,547	2,651	17,911,239
1869	20,189	41,075,321	2,712	21,915,849
1873	28,332	55,675,421	3,469	29,989,152

Properly to understand the causes of fluctuation in the column gross receipts per mile, several facts must be remembered, viz., that the mileage of railway is constantly increasing ; that the tariff of freight for goods and minerals has on most lines lessened ; that the average passenger fares have likewise lessened ; and that the ratio of third class receipts has increased more rapidly than those of the first and second class. Every average mile of railway earns more money than in former years ; and this it is that encourages the companies to make new branches and extensions, as feeders for the main lines if not for their own individual value. The net revenue, singular to say, has never been far removed from half the gross revenue ; sometimes a little under 50 per cent., more frequently a little over. In the year 1873 the ratio of net revenue was brought down lower than usual, by the high prices paid by the companies for coal, iron, engines, and men's wages.

Many other particulars might be given, tending to illustrate

the characteristics of our vast railway system; but as they would occupy too much space if recorded for many different years, we will give the figures for 1873 only. For some purposes the public would naturally wish to know in what proportions the three sections of the United Kingdom contribute to the aggregate results; and we find the figures stand thus :—

1873.

	Miles.	Total cost.	Passengers.	Receipts.
		£		£
England and Wales ..	11,369	490,018,994	401,722,556	47,061,989
Scotland	2,612	69,126,420	37,550,503	6,072,435
Ireland..	2,101	29,174,894	16,361,704	2,540,997

In regard to some other items, it may be well to observe that Railway Companies find it convenient, for many purposes, to tabulate what are called *train miles.* A train of carriages travels from a starting point to a terminus, and earns an amount of money depending on the mileage and other circumstances. Taking all the trains on all the railways on all the days of the year, it is found that goods trains, one with another, travel a greater number of miles each than passenger trains. Each of these miles is called a *train mile;* it is found that the gross earnings are about 5*s.* 8*d.* per train per mile. The following additional particulars may be presented for the year 1873 :—Railways open in United Kingdom, 16,082 miles; share capital paid up, 432,576,874*l.*; loan capital, 55,888,714*l.*; debenture stock, 99,855,120*l.*; total cost per average mile, 36,574*l.*; net return on capital, 4⅓ per cent. per annum. *Receipts* by passenger trains, 23,855,892*l.*; receipts by goods trains, 31,821,529*l.*; first class passenger fares, 4,373,274*l.*; second class fares 3,984,718*l.*; third class fares 11,750,588; season tickets, &c., 978,967*l.* *Number of Passengers* :—First class, 38,310,754; second class, 70,327,428; third class, 346,682,006; season ticket journeys, 314,579. Weight of minerals carried, 112,618,698 tons; general merchandize, 78,344,759 tons. Receipts per goods train mile, 6*s.* 4*d.*; receipts per passenger train mile, 5*s.* Total expenses per train-mile, 3*s.*; total expenses for locomotive and rolling stock, 1*s.* 2*d.*; total expenses for other items, 1*s.* 10*d.* Gross receipts per mile per annum, 3,462*l.*; expenses per mile per annum, 1,866*l.* *Working Plant* :—Locomotives, 11,435; passenger carriages, 24,634; vans, horse-boxes, &c., 9,128; waggons and trucks, 329,023; total wheeled vehicles, 374,220, or about 23 per mile.*

* Since the above was written, the official accounts for the year 1874 have been published. The following are a few of the particulars :—Length open, 16,449 miles; cost, 609,895,931*l.*; cost per mile, 37,078*l.*; number of passengers, 477,840.411, of whom 366,302,689 were third-class; passengers per mile open, 29,081; total traffic receipts, 49,255,715*l.*; net receipts, 26,643,003*l.*; locomotives, 11,935; passengers' carriages, 25,441; goods and mineral vans, trucks, waggons, &c., 354,458; total wheeled vehicles, 379,899.

The engineering grandeur of the railways of the United Kingdom is too large a subject even to be touched on here. The terminal stations of the principal companies now cover an amount of space, and entail an expenditure, little anticipated in the infancy of the system. It was just half a century ago (1825), that the Stockton and Darlington line was opened; since then the enlargement of stations, the lowering of fares, and the increased ratio of third-class passengers, have progressed continuously.

CENTRAL AND NORTHERN EUROPE.—Countries beyond the limits of the British Islands may be treated in briefer style than we have hitherto adopted; because the trustworthy information obtainable is less complete, and because a smaller amount of detail will suffice for English readers.

France.—The railway system of France has been organized on a plan very different from that adopted in our own country. The action of the State is much more directly felt in this as in many other departments of commercial and social life. Moreover, the French are more prone than ourselves to monopolies; and the Joint Stock system is not so unhesitatingly entered upon without some sort of Governmental guarantee. All these three characteristics have been factors in determining the nature and extent of the railway network. France had very few railways down to 1840, a date at which our own system had made a considerable advance; a few timid companies had constructed a short mileage of line, but there was no dash or energy in the undertakings. The State entered the field in the year here named, at first with an intention that the whole of the railways should be constructed by, or should at any rate belong to, the Government. In 1842 this plan was modified, in order to give commercial companies a greater interest in the matter. A kind of partnership was formed between the companies and the State; the former found the capital and constructed the lines; the latter exercised supervision, and guaranteed the companies against dangerous rivalry or competition. A distinction was made between the *old network* and the *new network*. The former was to comprise the main lines of railway, leading from Paris to the chief towns and to the frontiers; the latter was to include the feeders and branch lines, constructed rather for the accommodation of the public than for a large return in the form of dividend. Each great company was bound to provide its branches and feeders, in return for a guarantee that the main lines, the real sources of profit, should not be imperilled by new comers or other competitors. The main lines are so sure of success (owing partly to the cost of construction having been much less than in England, and partly to the position of France on the great route to so many Continental countries), that no Government aid is necessary to the securing of a handsome dividend on the capital expended; but the branches on the minor network are in many cases guaranteed a minimum of 4 per cent. by the State, in order that the loss, if any, should be but trifling.

In 1873, the railways constructed and open for traffic had an

aggregate length of 17,395 kilomètres, about 10,785 English miles. These were divided according to the nomenclature just described, into 9,247 kilomètres of old system or main lines, and 8,148 kilomètres of new system or branch lines. The gross receipts in that year amounted to 790,000,000 francs (31,600,000*l.*), at the rate of 2,692*l.* per mile per annum on the main lines, and only 820*l.* on the branches. The reader can compare the traffic in the two countries:—in England, 55,600,000*l.* earned on 16,082 miles of railway in 1873; in France, 31,600,000*l.*, earned on 10,785 miles, in the same year. This balance is in favour of France, and is rendered much more favorable by the lower cost per mile. The French railways are nearly all owned by six great companies. The *Northern* connects Paris with Amiens, Arras, Boulogne, Dieppe, and Belgium; the *Western* with Rouen, Havre, Cherbourg, Brest, Rennes, &c.; the *Eastern* with Chalons, Strasburg, Baden, and Switzerland; the *Southern* with Toulouse and the Spanish frontier; the *Paris and Orleans* with Tours, Nantes, Poitiers, Angoulême, Bordeaux, and Bayonne; and the *Paris and Mediterranean* with Dijon, Lyons, Avignon, Marseilles, Toulon, Nice, and the Italian frontier. The length of line possessed by some of the companies far exceeds that possessed by any company in England; especially is this the case in reference to the *Paris and Mediterranean*, which owns 4,766 kilomètres of line (2,955 miles); and the *Paris and Orleans* (4,152 kilomètres = 2,583 miles). The length of railway compared with the area of country presents striking points of difference in various parts of Europe; in the United Kingdom we have one mile of rail to about seven square miles of area; whereas in France the one average mile suffices for nineteen square miles; in other words, railways are nearly three times as numerous with us as with the French, relatively to the size of the country.*

The French railways are not distinguished for magnificence of engineering work. The country is comparatively flat; the rivers, though numerous, are of moderate width, and pierce through very few deep ravines; while the alternations of hills and hollows are not so frequent as in England. Moreover, French travellers do not demand such high speed as English, and therefore less expenditure is incurred in making tunnels and viaducts to insure easy gradients.

Belgium.—There is much that is instructive in the railway system of the small but thickly populated country of Belgium. Nearly the whole of the lines belong to the State; or rather their commencement was marked by this system. The first railway sanctioned by the Legislature was the Brussels-Mechlin, and this was finished and opened in 1835. During the next nine years new lines were constructed in various directions,

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bringing up the length to 560 kilomètres (347 English miles) in 1844. After that year, the enterprise of commercial companies was brought into requisition, and the progress of railway construction became much more rapid. Small as the country is, new routes were established in every direction, making the railways of Belgium more really a network, lines intersecting at numerous points, than those of any other country in Europe. Ostend, Bruges, Antwerp, Brussels, Mechlin, Courtrai, Ypres, Ghent, Tournay, Mons, Charleroi, Namur, Liège, Verviers, Turnhout, Maestricht, all are familiar with the locomotive, and some of them accommodated by as many as five or six railways. The stations and the stoppages are so numerous, that express speed is but little attempted; and as the country is very flat, the lines have been economically laid out and constructed. At the end of 1873, Belgium contained 3,370 kilomètres (2,089 miles) of railway, a great mileage for so small a country; indeed, the United Kingdom is eclipsed by it in this particular; for, while we have one mile of rail to seven square miles of area, Belgium has one to every five miles. Three different proprietary systems are observable among these railways; 595 kilomètres were formed by, and belong to, the State; 746 were constructed by companies, but are leased by the State; while the much larger quantity of 2,029 kilomètres is worked by the companies that constructed it. The State railways were constructed at an average cost of 18,288*l.* per English mile, about one-half the English average. After defraying the working expenses, the State devotes the surplus, as a sinking fund, to recoup the original capital; and so steadily has this plan been acted on, that the whole cost is expected to be refunded by the year 1884. After that date, all the net profit from working will go to the general revenue of the country—lessening the National Debt, instead of increasing it. By the terms of concession, all the railways at present belonging to companies will become the property of the State at the end of a lengthened period, in most cases ninety years from the date of the concession. The companies do not possess the freehold of the land occupied by their lines and stations; land and railways alike revert to the State at the end of the stipulated period. We adopt a plan similar to this in regard to building leases, but not in regard to railways; the latter belong absolutely to the companies, and do not become the property of the State by any efflux of time.

Holland.—The northern neighbour of Belgium is much less closely intersected by railways, having one mile of line to about eighteen square miles of area, instead of one in five. Rather less than half of the mileage belongs to the State, the rest to thirteen or fourteen companies. In 1873 the proportion stood thus: 815 kilomètres of State railway, and 853 of railways belonging to companies, making a total of 1,668 kilomètres (about 1,000 miles). As the country is nearly as flat as a billiard table, the railways have not cost more on an average than 10,000*l.* or 11,000*l.* per mile; some of them far less. The

Dutch have done mighty things with their ship-canals, dykes, and lake-drainings, but have not been called upon to exercise much engineering skill in the construction of their railways. The cities and towns of Amsterdam, Rotterdam, Utrecht, Haarlem, Leyden, the Hague, Helder, Delft, Gouda, Dordrecht, Bois le Duc, Groningen, &c., are now linked together by rail; and the trade is amply sufficient to yield a good return on the capital expended.

Denmark.—The length of railway in 1873 was set down at about 560 English miles. It is not a country favourable for railway travelling, seeing that, after crossing the comparatively narrow peninsula of Jutland and Sleswick, we find deep and broad straits barring the access to the islands of Funen, Zealand, Laaland, Falster, Moen, &c. By no probable chance will Copenhagen ever be connected by rail with the other capitals of Europe; it is on the island of Zealand, which is surrounded by the waters of the Baltic, the Sound, the Kattegat, and the Great Belt. If the railways of this sadly shorn kingdom pay their way, it is as much as can be expected.

Sweden and Norway.—Manifold larger than Denmark, the united kingdoms of Sweden aud Norway are very troublesome to railway engineers. It may almost be said that wherever there are not mountains there are lakes—lakes from a mile or so in length to the fine Wener Lake, which is something like 70 miles by 50. The Dovrefeld range of mountains, forming the boundary between the two countries for twelve degrees of latitude, presents a formidable difficulty to railway construction; and it is not likely that the locomotive will ever cross it at more than two or three points. Most of the Swedish towns possessing any noticeable amount of trade are in the southern part of the kingdom, such as Stockholm, Upsala, Nyköping, Carlskrona, Malmö, Landskrona, and Gothenburg; while the few in Norway, including Bergen, Trondjem or Drontheim, Christiania, and far north Hammerfest, are on the western coast. Vast tracts of both kingdoms are never likely to hear the whistle of the locomotive. The country had managed, nevertheless, to construct 1,082 English miles of railway by the year 1873, of which 694 miles belonged to the State, 115 miles to companies, and 273 miles jointly to the State and companies. Schemes had, at the same period, been sanctioned for several hundred more miles, marked out for construction in 1874 and 1875. These relate to Sweden. Norway is constructing a line of 316 English miles, from Christiania to Bergen; another, of 307 miles, from Christiania to Trondjem; and others that will, by and by, raise the Norwegian contingent to about 1,200 English miles, belonging to thirteen or fourteen companies.

Russia.—The vast and unwieldy Russian Empire is especially in need of railway facilities. The distances from one frontier to another, measured in most countries by hundreds of miles, are here measured by thousands, entailing the consumption of weeks or even months of time in maintaining communication by road vehicles. There is a great temptation to lay down railways in

Russia, owing to the general level which it presents, and the small sum per mile at which a line can be constructed, when it is almost without gradients, tunnels, cuttings, embankments, or viaducts. Nevertheless, a scantily inhabited and generally poor region affords but sorry prospect of a brisk railway traffic. The problem has been solved, or is gradually being solved, by the sovereign will of the potentate. The late Emperor Nicholas gave a start to the system, by constructing a few main lines at the cost of the State; and the present Emperor has energetically followed in the same course. A beginning was made so far back as the year 1838, by the construction of a suburban line out of St. Petersburgh. The State, shortly afterwards, while constructing two or three longer lines, to connect St. Petersburgh, Moscow, and Warsaw, held out encouragement to joint stock companies to enter the lists. Land was to be given to them free of cost; rails and locomotives were to be imported duty free; labour was procurable at very low wages; the exclusion of competing rivals was ensured; and the State guaranteed that the shareholders should receive not less than a specified rate of dividend, with a fair prospect of much more. On the other hand, the companies are bound to lay by a sinking fund for the redemption of capital, in order that the railways may revert to the State in eighty years' time. The scheme has been so well considered that the commercial men of Russia have entered into it with earnestness; insomuch that there are now fifty distinct railway companies for the construction and maintenance of an equal number of lines, without reckoning the railways which are wholly in the hands of the State. At the end of 1873, the total length decided on was 19,925 versts (13,280 English miles); of this extensive system, 15,842 versts (10,560 miles) were finished and opened for traffic; 1,740 versts (1,160 miles) in course of construction; and 2,373 versts (1,560 miles) surveyed, but not commenced. The companies had spent 180,000,000*l.* by the end of 1873—a very large sum for a country so little provided with available capital. As the length of line to which this applies is not specified, we cannot state the average cost per mile. Glancing at a map of Russia in Europe, we see how great are the distances between the principal towns. Archangel in the bleak north, Abo on the Gulf of Bothnia, St. Petersburgh at the head of the Gulf of Finland, Warsaw near the Prussian frontier, Odessa on the Black Sea, Astrakhan on the Caspian, Orenburg at the foot of the Ural Mountains, Moscow and Nijni Novgorod near the centre, are wider apart than whole kingdoms in other parts of Europe. The chief lines of railway at present open for traffic are those from St. Petersburgh to Moscow, St. Petersburgh to Warsaw, Moscow to Nijni Novgorod, Komsk to Azof, Moscow to Riazan, Orel to Vitebsk, Voranej to Rostoff, Warsaw to Cracow. We need not, then, feel much surprise that Russia in Europe contains but one mile of railway to 170 square miles of surface, one mile in a square measuring 13 miles on each side; rather should we award praise to the people for having made so creditable an

advance, in a country so recently emancipated from the semi-barbarism of serfdom. The railways of Asiatic Russia are written in the future. The locomotive has scarcely been seen in the thousands of miles that separate the Ural from Kamtchatka, or in the shorter but still vast distance from the Siberian Ocean to the Persian frontier. A scheme has lately been suggested by M. Lesseps, for a railway from Orenburg, on the European frontier, to Taskkend and Samarcand, in the region of the Oxus, stretching diagonally across the new province of Russian Turkestan. Much will have to be weighed and considered before so extensive a plan can be adopted; but there is little doubt that the spread of Russian dominion in those regions will lead to the construction of railways where predatory hordes of Tartars and Turcomans have hitherto held almost undisputed sway.

Germany.—The wars of 1864 and 1866 added considerably to the area of the Kingdom of *Prussia.* This successful belligerent swallowed up Lauenburg, Holstein, part if not the whole of Sleswick, Hanover, Nassau, aud part of Hesse. She has now a conqueror's right to reckon the railways of those States as component parts of her own system. Under this point of view, the Prussian railways comprise twelve main lines belonging to the State, and three others partly constructed and aided by the State. The lengths of these two groups are 549 and 325 German miles respectively. Reckoning the German mile at 4·68 times as long as ours, the aggregate length is equal to 4,040 English miles. These, however, form but the smaller half of the system; for twenty-seven companies are the owners of 998 German miles of railway, wholly constructed by themselves. The total is, therefore, raised to 8,700 English miles. The arrangements made with the companies, as in some other countries we have treated of, are such that the whole of the railways will become State property after a series of years. Although Prussia is by far the largest and most important component State in the lately-formed German Empire, there are others that possess valuable lines of railway, interwoven into a very busy network. *Bavaria* had spent about 13,000,000*l.* on railways by the end of 1873, nearly all belonging directly to the State. *Wurtemburg* has spent about 11,000,000*l.*, the whole of which yields 6 to 7 per cent. net profit on the capital expended; this profit is applied towards paying the interest on the public debt. *Saxony* and *Baden* are similarly intersected by lines which belong to the State, and which yield an adequate return on the cost of construction. Without mentioning separately the seventeen minor States, some of which are less populous than a single London parish, it will suffice to present a few figures relating to the entire German Empire. The aggregate length of railway open at the end of 1873 was about 12,700 English miles, of which 7,620 belonged to the several Governments and 5,080 to companies; presenting an average of one mile of railway to sixteen square miles of country—a network rather less than half as close as that of the United Kingdom, but somewhat closer than that of France or Holland. The

tabular list given in a former page, concerning the passenger traffic on English railways, may be used for purposes of comparison with the following figures, which show the amount of railway travelling on the railways of Germany in the year 1873:—1st class, 1,313,685; 2nd class, 16,536,832; 3rd class, 63,116,229; 4th class, 17,294,558; soldiers and emigrants (at reduced fares) 14,628,191. The goods and minerals carried, of which coals and coke constituted one-third of the total weight, 1,395,000,000 centners of 110 lbs. each—about 70,000,000 English tons (against 190,000,000 tons in the United Kingdom). Considering that the German Empire now comprises all the region from Tilsit, on the Russian frontier, to the Lake of Constance, on the borders of Switzerland, and from Sleswick, on the Danish frontier, to Passau, near the border of Austria, it may well be believed that the railways accommodate a large number of towns whose names are familiar to us—Königsberg, Dantzig, Posen, Stettin, Berlin, Rostock, Kiel, Lübeck, Hamburg, Magdeburg, Brunswick, Minden, Hanover, Bremen, Oldenburg, in the north; Breslau, Dresden, Hallé, Leipzig, Chemnitz, Göttingen, Gotha, Coburg, Meiningen, Weimar, Cassel, Giessen, Frankfort, Munster, Düsseldorf, Cologne, Aix-la-Chapelle, Essen, Bonn, Coblenz, Mayence, Wiesbaden, Ems, Homburg, in the middle region; Ratisbon, Munich, Augsburg, Ulm, Ingostadt, Merseberg, Bayreuth, Bamberg, Freiburg, Stuttgardt, Carlsruhe, Darmstadt, Heidelberg, Mannheim, Landau, Strasburg and Metz (recently taken from France) in the south and south-west. There is not one of these towns which does not now possess the advantage of a railway system. Ranges of hills have not been crossed to any considerable extent; but some of the bridges over the Rhine, Danube, and Elbe have called for a large amount of engineering skill.

Southern Europe.—As we advance further and further towards the south, we find manufactures and commerce less active. Nevertheless, important developments of the railway system have taken place in many of the countries.

Switzerland.—Considering that this small region bristles with mountains from one end to the other, the length of railway bears a creditable ratio to the area. In 1871 there were 820 miles, or one mile to every 18 square miles of land—a ratio fully equal to that of France. In the United Kingdom we have about a yard of railway to every eleven inhabitants; in Switzerland there is more than a yard of railway to every two inhabitants; a fact, however, which shows, not that Swiss railways are more closely packed than in our own country, but that the population is much scantier per square mile. Most of the Swiss railways are in the northern half of the little republic, where they wind their way along the valleys between the mountains, or by the shores of the beautiful lakes of Geneva, Neufchatel, Bienne, Lucerne, Zug, Zurich, and Constance. The Bernese Oberland, with the Pennine and Pontine Alps, interpose a formidable difficulty to railway construction in the south, and to intercommunication with Italy.

In what way Mont Blanc, the great St. Bernard, the Matterhorn, Monte Rosa, the Simplon, St. Gothard, the Splügen, and the Stelvio rear their mighty heads along this barrier, a glance at any map of Switzerland will show. The schemes that were under discussion a few years ago, for piercing this Alpine frontier with railway tunnels, were noticed in a former volume of the *Companion to the Almanac.** The passes of the Simplon, St. Gothard, the Splügen, and the Lukmanier all had their advocates, the advantages seeming to preponderate in favour of the St. Gothard, on the direct highway between central Switzerland and northern Italy. This scheme has been further advanced since, but many years will elapse before the heavy works can be completed. Three Alpine railways, finished and opened for traffic, are beyond the limits of Switzerland—the Mont Cenis, between France and Italy ; the Brenner, between the Tyrol and Italy ; and the Sömmering, between Austria and Italy. The most singular bit of railway in Europe, perhaps, is that which climbs up the beautiful Swiss mountain called the Righi ; in steepness it almost rivals the roof of a house, and requires well-planned precautions to prevent the trains from toppling over into the valley beneath. To see the sun rise on the summit of the Righi is a recognized achievement of Swiss tourists, and the purpose of the little railway is chiefly to facilitate the ascent.

Austrian Empire.—The empire of Franz Josef is made up of many kingdoms, principalities, and archduchies ; but all are now comprised in two groups, governed by Austria and Hungary respectively, while the same monarch is king of these two. There being two governments, and two systems of taxation, the railways of Hungary are financially independent of those of Austria, though both naturally conduce to the development of the commerce of the empire generally. Stretching as the empire does from the Bavarian and Swiss frontiers on the north-west to the Servian and Turkish frontiers on the south-east, and from Russia on the north-east to the Adriatic on the south-west, there are, of course, many important cities and towns which would value the trade-encouraging introduction of railways. The lines constructed down to 1873 were computed at about 11,600 English miles, of which 9,570 miles were in the Austrian section, and only 1,030 in the wide-spreading Hungary. This difference is explained by the nature of the two countries ; Hungary having no seaports, and depending almost entirely on agriculture. The State either constructs the railways, or encourages companies by advantageous terms of arrangement. The locomotive is brought within reach of Innsbruck, Botzen, Trent, and Salzburg in the west ; Prague, Pilsen, Olmütz, Cracow, and Lemberg in the north ; Trieste, Laybach, Klagenfurt, Gratz, Agram, Temesvar, and Orsova in the south ; and Linz, Vienna, Budweis, Bruck, Brunn, Presburg, Pesth, and Tokay in the central belt ; but the eastern part of the empire, comprising Transylvania, the Bukovina, and the Banat, is very

* For 1871, "Summit Railways and Mail Routes."

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scantily supplied with this species of accommodation. The greatest railway engineering works are the bridge over the Danube at Pesth, the crossing of the Alpine Pass at the Brenner, and that of the Noric Alps at the Sömmering. A few viaducts and tunnels occur in the Tyrol and among the Carpathians; but the Hungarian lines are mostly on the dead level of a flat country.

Italy.—Since it ceased to be a mere geographical expression, and became a nation, Italy has made fair progress towards developing a railway system of reasonable extent. The Appennines, running down the peninsula from the Lombard and Venetian provinces almost to the "toe of the boot," present an obstacle to free intercommunication between the eastern and western regions of the kingdom; nevertheless, there are three crossing-places which have been successfully surmounted. Among the famous cities and towns which are familiar to every reader, either for their picturesque beauty or their historical associations, the locomotive now reaches the greater number. In Northern Italy, Susa, Rivoli, Turin, Como, Milan, Bergamo, Brescia, Verona, Vicenza, Venice, Treviso, Padua, Ferrara, Villafranca, Mantua, Cremona, Piacenza, Pavia, Lodi, Alessandria, Genoa, Voltri, Savona, Spezzia—all have railways running through or near them; Central Italy is similarly accommodated at Leghorn, Pisa, Lucca, Florence, Pistoia, Reggio, Modena, Parma, Bologna, Faenza, Ravenna, Rimini, Pesaro, Ancona, Loretto, Arezzo, Sienna, Perugia, Terni, Civita Vecchia, and Rome; while the like occurs in Southern Italy at Albano, Velletri, Frascati, Capua, Naples, Benevento, Salerno, Brindisi, Otranto, and Reggio. Sicily, with Etna towering to so grand a height, is a formidable island for railway engineering; in spite of this, one line connects the towns of Messina, Catania, Syracuse, and Leonforte, and another Palermo, Termini, and Lercara. The neighbouring island of Sardinia, another component part of the Italian Kingdom, has a railway which connects Cagliari with towns hardly known even by name to English readers. At the end of 1873, the entire network of Italian railways reached 4,327 miles, about one mile of line to 26 square miles of country. Of this mileage only one-sixth is double-line, all the rest being formed on the single-line system. In a country where there is very little express speed, only a few trains on each railway per day, and leisurely stoppages at the stations, single lines serve sufficiently well. Some of the lines have been constructed by companies; but commercial enterprise was not sufficient to develop the system fully without State aid.

Spain.—The peninsula that terminates Europe on the south-west is so behind-hand in commercial and industrial enterprise, and the larger portion of it so distracted by dynastic and political contentions, that railway enterprise has marched more slowly than the importance of the country demands. The interior, too, is so cut up by mountains and ravines that the attainment of available gradients involves heavy engineering work. Spain has adopted the plan of inviting companies to construct the railways,

with subventions from the State. All the principal lines have been confided to private individuals in the first instance. The maximum amount of subvention or monetary aid is specified, and then the adjudication is determined by public tender. Any influential person who has deposited a definite amount of caution-money may send in a sealed tender; and all such tenders are opened on an appointed day, in presence of the tenderers or their representatives. Whoever, as tested by the tenders, offers to construct the railway with the lowest amount of subvention, becomes entitled to the concession. Sometimes a single individual obtains it, and then forms a joint-stock company to subscribe the requisite capital. The subventions are paid by instalments during the progress of the works, not often in cash, but by bonds or obligations bearing 6 per cent. This is not an unsatisfactory system, so far as its guiding principle is concerned; but it is marked by two or three contingent disadvantages. If the competitors are few, none of them are likely to offer such favourable terms as if they are many; if one of them tenders very low in order to make sure of the contract, he may become bankrupt, and the works be brought to a standstill; while the credit of the Spanish Government has become so shaken, that 6 per cent. obligations are falling lower and lower in the market, rendering capitalists distrustful of any such enterprises. We need not wonder that, under such disadvantages, Spanish railways are few compared with the extent of the country. Of the numerous important cities and towns in Spain—Barcelona, Tarragona, Saragossa, Pampeluna, Bilbao, Santander, Burgos, Oviedo, Valladolid, Leon, in the north; Valencia, Madrid, Toledo, Segovia, Salamanca, Ciudad Rodrigo, Alcantara, in the middle zone; Murcia, Cartagena, Granada, Almaden, Cordova, Malaga, Seville, Badajoz, Cadiz, in the south—more than half were beyond reach of the locomotive in 1870, the total length of work being 3,800 miles. There were, however, 1,270 miles of additional line under construction; and we may infer that some of that mileage has by this time been opened for traffic—so far as the contests between Alfonsists, Carlists, and Republicans will permit.

Portugal.—If Spain is very turbulent, its neighbour Portugal is rather somnolent, tardy in developing its resources, and falling back from the position which it once held among the nations of Europe. The railways of that country, like those of Spain, are aided by subventions. At the end of 1872 barely 530 miles were open and at work; other lines were stopped in process of construction for want of funds. Much more than this will be necessary to connect Braganza, Miranda, Oporto, Coimbra, Abrantes, Setubal, Coora, and Beja one with another, and with the capital, Lisbon.

Roumania.—The former Turkish provinces of Wallachia and Moldavia have so recently entered into the European family of nations, that their new name, Roumania, has scarcely yet become familiar to English readers. The proximity to the Black Sea

and the Danube, however, renders the country commercially important, and gives much activity to the towns of Bucharest, Giurgevo, Jassy, Ibraila, Galatz, &c. The first line of railway was opened so recently as 1869, from Bucharest to Giurgevo; and other lines connect the chief towns with each other, with the land frontiers, and with the ports of the Black Sea.

Turkey.—Backward in every branch of manufacturing and commercial enterprise, the dominions of the Sultan have up to the present time been very scantily supplied with railways. A system was planned in 1865, but has hitherto been tardily entered upon. There were only 47 English miles of railway open at the end of that year, 180 miles by the end of 1869, and 488 miles by the end of 1873. The Varna and Rustchuck line, and the Smyrna and Aïdin line belong to English companies, the Constantinople and Adrianople line to a French company, while a short mileage belongs to the State. Upwards of 1,500 miles of additional line are planned; but Turkey has to pay so heavy a rate of interest for loans, and companies require such extensive subventions and guarantees, that railway extension moves on very slowly. Such cities and towns as Belgrade, Widdin, Sophia, Rustchuck, Silistria, Varna, Salonika, and Adrianople, ought to have railway communication one with another, and with the grand capital Constantinople.

Greece.—The country that once stood at the head of European civilization now stands at the bottom. Greece produces very little besides wine, currants, anarchy, and brigands. It can boast of only seven miles of railway, from the once famous city of Athens to the port of Piræus. Corinth, the rich islands of the Ægean, and the Ionian Islands (now belonging to the Greek Kingdom), are as badly off as Turkey in facilities for moving from place to place.

AMERICA.—The course of our rapid sketch now takes us to regions beyond the Atlantic.

United States.—There is no feature in which the great American Republic has more signally shown its activity, energy, and wealth of material resources, than in the development of a network of railways. True, a vast area of the country is so flat that engineering works can be carried on with facility at a comparatively small cost; but, on the other hand, the Alleghanies and the Rocky Mountains interpose many obstacles to the construction of main east and west routes; while, on the flat prairie lands, a sparse population offered but slender encouragement for the extension of the system. If the Government had not possessed hundreds of millions of acres of unoccupied land, the mileage of railway constructed down to the present time would have been far less extensive than it is, for commercial capital would not have been forthcoming in sufficient quantity; but in any case it is a great credit to the nation to have carried the iron road across the whole breadth of the American Continent, from New York, on the Atlantic coast, to San Francisco, on that of the Pacific. The system began in

1829, without any aid from the Legislature, and advanced steadily but not rapidly. There were 23 miles constructed by the end of 1830, 1,098 in 1835, 2,810 in 1840, 4,677 in 1845, and 9,021 in 1850. In that year an important change of system took place. The Government, on approving the plan of any proposed railway, offered free grants of such national land as the line might pass through; not only the strip of ground for the railway and its stations, but blocks on either side, comprising 640 acres in each block. The temptation was great, seeing that the companies were encouraged to lay out these blocks into townships, which might be bought or leased by farmers and stock rearers, and the settlers on which would become railway passengers, while their crops would supply freight for the goods trains. The Illinois Central was the first company assisted in this way, obtaining a free gift of no less than 2,500,000 acres of land. Other companies followed in rapid succession. The benefit thus rendered has been almost incalculable. Regions which a few years ago were held wholly by the Indian and the buffalo are now studded with the homesteads of settlers, who are every year adding more and more to the food-crops which supply the world. Seven thousand miles of railway were finished and opened before this land-grant system was begun; the mileage now nearly equals tenfold this amount. The grants above-named were in most cases made over by the Central Government at Washington, in the name of the whole nation, to the Governments of the several States of the Union, and by the latter to the respective railway companies. When, however, it was decided to encourage the grand schemes for a through communication from ocean to ocean, across the whole breadth of the Republic, through unsettled territories as well as settled States, it was seen that a more direct guarantee would be needed. The two main components of this through route, known as the Union Pacific and the Central Pacific Railways, have received free grants of land varying from 13,000 to 26,000 acres per mile —amounting to something like 200,000 square miles of land in all—a most prolific land-bank for the future of those Companies. The Government also gave financial aid, by facilitating borrowing, and easing the immediate pressure on the shareholders.

Dividing the whole area of the Union, comprising 45 States and Territories, into seven regions, the following were the lengths and costs of railway open for traffic to the end of 1871:—

	Miles open.	Cost.
(1.) New England States	4,985	$234,000,000
(2.) Eastern ,, ...	12,322	$783,000,000
(3.) South-eastern ,, ...	6,567	$190.000,000
(4.) South-western ,, ...	7,032	$246,000,000
(5.) East interior ,, ...	18,164	$814,000,000
(6.) West ,, ,, ...	11,338	$515,009,000
(7.) Pacific Slope ,, ...	2,239	?
	62,647	

Selecting 18 out of the 45 States and Territories, the following order is observable among the mileages of railway :—

	Miles.		Miles.
Illinois	6.304	Kansas	1,703
Pennsylvania	5,521	Alabama	1,698
New York	4,253	Wisconsin	1,653
Ohio	3,860	Massachusetts ..	1,642
Indiana	3,710	Minnesota	1,553
Iowa	3,162	Tennessee	1,521
Missouri	2,685	Virginia	1,478
Michigan	2,638	Carolina, North ..	1,261
Georgia	2,157	,, South ..	1,210

All the other States and Territories came below 1,200 miles of railway each. The most costly lines were those constructed in the States of New York and Pennsylvania, where land, compensation, and works were all comparatively heavy items ; the expenditure (omitting extra outlay incurred since) was about 60,000 dollars, or 12,000*l.* per mile.

Besides the 62,647 miles finished and opened for traffic at the end of 1871, there were upwards of 42,000 additional miles planned and partly constructed—making a vast prospective total of 105,000 miles within the States and Territories of the Union. By the end of 1872 the cost had increased to about 700,000,000*l.* The trade and finances of the United States were much disturbed in 1873 and 1874, and the expenditure on new railways was kept down to a comparatively low figure. The gross frauds committed by speculators on the Erie and one or two other railway companies shook the confidence of the public in joint stock enterprises generally, and brought down the value of securities to a seriously low ebb in the money market. The total length of railway open at the end of 1874 was 69,273 miles. The total cost was 4,221,763,594 dollars (about 850,000,000*l.*). The year 1874 was marked, as we have said, by dulness and disaster in American trade ; as a consequence, the receipts on the railways were not so large as they would otherwise have been. They amounted to 520,466,016 dollars (104,000,000*l.*). The goods traffic brought nearly threefold as much money as that of passengers, a ratio very different from the average English standard. The working expenses were also higher with the Americans than with us. That which may possibly, in future times, be the most important through route in the world, the Rocky Mountain route from the Atlantic to the Pacific, together with other parallel lines which have been projected, was described in the *Companion* for 1871, pp. 50 to 53.

In *British North America*, owing to various circumstances, the progress of railway construction has been much slower than in the United States. In the first place there were, until recent years, six distinct Governments, each having its own ministry and its own legislature, each raising and expending its own taxes, and each having its occasional jealousies against some of or all the

others. Canada, New Brunswick, Nova Scotia, Prince Edward Island, Newfoundland, British Columbia, formed distinct colonies. Steps are now being gradually taken towards an amalgamation into one grand colony, called the Dominion of Canada; but nearly the whole of the existing railways in that region were planned and constructed before the federal union had commenced. In the second place, the home Government has always had a voice in determining many of the proceedings of the colonies—a voice sometimes amounting in force to a veto, and always entailing a long delay in transmitting despatches to and fro across the Atlantic. And in the third place, our Colonies have never yet possessed so much accumulated wealth as the United States, nor so much of the commercial enterprise which leads to the formation of joint stock companies. Put these three considerations together, and we see why it is that British America, with its vast area, compares so unfavourably with the United States in the mileage of its railways. At the end of the year 1873, the lines opened for traffic amounted in length to 3,478 miles; while 1,250 more miles were under construction, and about 3,000 miles surveyed and agreed upon. The expenditure down to the end of the preceding year had been 33,000,000*l*. It is a necessity resulting from the configuration of the country, that the main lines of rail are determined by the position of the great lakes and the direction of the River St. Lawrence. It was a matter of necessity to connect the cities of Quebec and Montreal, and both of them with Kingston and Toronto. Moreover, all the five lakes—Ontario, Erie, Huron, Michigan, and Superior—in proportion as settlers congregated near their shores, required the accommodation of the iron road and the locomotive; and in addition to this, means had to be found for connecting the Canadian towns with those of Nova Scotia and New Brunswick. In an engineering point of view, the grandest work unquestionably is the Victoria tubular bridge over the St. Lawrence, at Montreal—one of the most gigantic undertakings that the history of railways presents.

The great feature to which the Canadians now look forward is the inter-Oceanic railway,—the line across the continent from the Atlantic to the Pacific. If the United States had not boldly set the example, there is very little probability that such an enterprise would have taken root. Now, however, a new motive is at work. British Columbia and Vancouver on the Pacific, and the little known fur-hunting region lately belonging to the Hudson's Bay Company, form under the new order of things parts of the same Dominion or Government as the Canadian provinces; and it is an object of much importance to obtain reliable and rapid means of communication from the one extremity to the other. True, there are at present but few settlers, towns, or centres of industry between Lake Superior and British Columbia; but on the other hand, it has been found that the Rocky Mountains can be crossed at a low altitude and with easy gradients; while there is a rich region, known as the "Fertile

Belt," which will in future be able to fill millions of mouths with its growth of corn. Under these circumstances, the Home Government has assisted the Dominion to raise capital for the construction of a great railway, to extend from the present Canadian lines at one end to the Pacific at the other.

Mexico.—It is difficult to reconcile one's self to the fact that Mexico is situated in that same North America which contains the United States and the Dominion of Canada; so different is it in population, government, produce, and institutions. Mexico is chiefly known to Europe for its revolutions, and for borrowing money which it never returns. Such a country is not likely to make rapid advancement in railway enterprise, irrespective of the fact that the centre of the region is very elevated, approachable only by steep ascents from the Gulf of Mexico and the Pacific. Down to the middle of 1874, little more than 320 miles of railway were open for traffic, from the port of Vera Cruz to the capital; about an equal mileage was in course of construction.

Central America.—We now come to a region still more unsettled than Mexico, because broken up into separate Republics nearly always torn by intestine conflicts between rival political factions. *Honduras*, under a semi-protectorate by England, has lately come into unenviable notoriety by failure to pay interest on loans. It brought forth a great scheme for a railway from the Gulf of Mexico to the Pacific; three loans were contracted in England for this purpose, between 1867 and 1870, to the aggregate amount of 6,000,000*l*. Of the intended length of 232 miles, only 62 miles were finished and opened by the end of 1872, at which time the works were brought to a standstill. Then some speculators endeavoured to find favour for a plan for a gigantic railway, broad enough to carry ships on a series of trucks; the capital required was 15,000,000*l*.; but those whose experience had already been so bitter refused to encourage such a wild idea. *Costa Rica* is another republic which has endeavoured to form a railway from sea to sea across this narrow part of America. The line was planned to extend from Alaguela to Limon, about 114 miles; by the end of 1873 the works were finished and opened 42 miles, to Cartago; but the "sinews of war" then failed, and little has since been done. *Nicaragua* has for a long series of years had an inter-Oceanic railway under discussion, or a railway combined with a portion of canal, or a canal only; but the difficulties are so great, the Government so little to be trusted, and capitalists so unwilling to risk their money, that nothing definite has yet been decided. *New Granada*, a kind of federation of republics, has really effected something valuable. The narrowest part of the whole American continent, the Isthmus of Panama, is within this State; and across the Isthmus is carried one of the most profitable bits of railway in the world. It was in 1855 that this railway was finished and opened, beginning at Aspinwall on the Gulf of Mexico, crossing a hilly ridge in the centre, and ending at the port of Panama

on the Pacific. The line is only forty miles in length, but its construction involved the loss of much life on the part of the natives employed as labourers, owing to the hot unhealthy swamps which were met with on the way. A great trade from the Atlantic to the Pacific is carried on by means of this railway; steam ships arrive at Aspinwall from New York and European ports; mails, passengers, and merchandise are transhipped for conveyance over the railway; and other steam ships, starting from Panama, maintain commerce with the Pacific ports of North and South America. As there is no competition within any practicable distance, the fares and freights are high, and the profits of the railway great.

South America.—The remaining portions of Central America, and the whole of South America, may be passed over rapidly. Yucatan, Belize, San Salvador, Mosquitia, Venezuela, Ecuador, call for no attention. *Peru* has a system of railways constructed with capital raised in England. The whole network to connect Lima, Callao, Arequipa, Cuzco, and Marequipa, will exceed 1,000 miles in length, and will cost not less than 25,000,000*l.*, if carried out according to present plans. At the end of 1873, the portion finished was about 400 miles, leaving 600 miles to be constructed between that year and 1880. So long as the lines keep near the Pacific coast, they involve no great amount of engineering difficulties; but one short line, to cross the Cordillera of the Andes between Arequipa and Puno, necessitates heavy works in cutting and tunnelling. Considering the political difficulties with which Peru has had to contend, her railway progress is creditable. *Chili*, the next door neighbour to Peru on the south, had constructed 620 miles of railway by the end of 1873, and had 200 additional miles in progress; two of the lines, from Valparaiso to Santiago, and from Santiago to Curiaco, are State property; the others belong to Joint Stock Companies. From the Pacific coast at Valparaiso, the first-named line has to ascend 1,800 feet in 115 miles to Santiago; this gradient gives origin to works of much boldness; and as both towns are populous and flourishing, the line is in many ways an important one. *Bolivia*, nearly as large as Peru and Chili combined, has a smaller extent of sea coast than any other American republic, and is usually too much distracted by civil discord to develop such resources as it possesses; it could only boast of two little bits of railway even so late as the middle of 1874. *Brazil*, a vast, but scantily populated, empire, covering more than 3,000,000 square miles of country, contains scarcely a single important town in the interior; no railway would find a trade for many years to come, except within a comparatively short distance from the Atlantic coast. The towns of Para, Maranham, Parahyba, Pernambuco, Espirito Santo, Bahia, Rio Janeiro, and Rio Grande (all on the coast), are growing in commercial importance; but the distances from town to town are so immense that there is not much encouragement to link them by railways. At the end of 1873 there were 700 miles of line finished and

open, and 400 under construction; nearly all the lines start from the capital, Rio Janeiro. *Paraguay*, a republic buried in the middle of the great continent, has only one railway of 45 miles. *Uruguay*, containing the busy commercial port of Monte Video, had 195 miles of railway open in 1874, and 225 more planned; but the financial discredit of the republic has much retarded the progress of the new lines. *La Plata*, or the *Argentine Confederation*, has the probability of a great commercial future. The magnificent rivers Plata and Parana flow from the distant interior to the Atlantic at Buenos Ayres; while the western margin confronts Chili at the Andes. The present railways comprise only a small portion of the mileage which will be constructed if the republic keeps clear of commercial and financial troubles. The lines open at the end of 1873 were 664 miles in length, connecting Buenos Ayres with Flores, Rosario, Cordova, and other towns of the interior; a length of 642 miles was under construction, to Tucuman and Dolores: a grand trans-Andean line of 894 miles was planned to climb up and over the Cordillera of the Andes, thus connecting Buenos Ayres in La Plata with Santiago in Chili; and 1,103 miles of line were projected in other directions. If the republic succeeds in obtaining all these railways, the total length will exceed 3,300 miles; but railways, like armies, are prone to be more extensive on paper than in reality. Most of the lines constructed belong to the State.

Taking a summary of the great American continent, from beyond the Canadian lakes on the north, to the limits of grazing land below La Plata and Chili on the south, enclosing about ninety degrees of longitude, or 6,000 English miles, we find (as might be expected) very different degrees of development in the railway system. Gold in one region, silver in another, coal and iron in a third, petroleum in a fourth, an almost inexhaustible area of rich corn land, prairies and plains that will graze countless herds of cattle, all develope railway enterprise in their own particular ways, though in different proportions. That the English-speaking race in the north is pushing on more rapidly than the Spanish-speaking race in the centre and south, is only what might be expected.

AFRICA.—As may well be supposed, the continent of Africa, so undeveloped in the components of civilization, has very little to show in the form of railways. Capital is wanting to construct the lines, and prosperous communities are wanting to supply the traffic. Only in the extreme north-east and the extreme south is the locomotive yet heard.

Egypt.—A vast step was made in opening communication between Europe and the East, or rather in improving the means of transit already existing, when a railway was constructed across Egypt, from Alexandria on the Mediterranean to Cairo on the Nile, and thence to Suez. Until the reign of Victoria, all our ships, East Indiamen and men-of-war, bound from England to India, China, and the Australian Colonies, had to take the cir-

cuitous route round the Cape of Good Hope. The old voyage of four months from England to Calcutta was lessened when steam became available; but the postal authorities, as well as the (then existing) East India Company, urgently sought for a shorter route. Some engineers turned their attention to the Euphrates, and planned a system of travel, partly rail and partly river, from the eastern end of the Mediterranean through Syria and Mesopotamia to the Persian Gulf, and so onward to India. This plan has not been put into execution; but better success has attended Lieutenant Waghorn's scheme of utilizing the Red Sea. His plan was to establish omnibuses across Egypt from the Nile to Suez, to run in connection with two lines of steamers, one from Alexandria to Southampton, the other from Suez to Bombay. He had the pleasure of seeing this idea realized in 1837, the first year of the present reign, and the journey to India shortened from four months to two months. The fine steam fleet of the Peninsular and Oriental Company gradually made the time shorter and shorter. Nevertheless, the transit of 84 miles over a desert from Cairo to Suez, in omnibuses fitted for little else than passenger conveyance, was a cause of much delay. The energetic Pacha of Egypt came to the rescue, by constructing a railway from Alexandria to Suez, superseding alike the small steamers up the Nile and the land vehicles to the margin of the Red Sea. For developing the resources of his country, he has since caused rails to be laid down in other directions; in 1873 there were 730 miles open and 587 miles making.

Cape of Good Hope and Natal.—Cape Colony had about 134 miles of railway finished and open at the end of 1873, starting from Cape Town as the capital; and other lines were under consideration. Natal, so much younger than Cape Colony, is making a creditable attempt to provide itself with the advantages of railways. Conventions were signed in 1873, whereby 345 miles of single line are to be constructed; the colony is to give 2,500,000 acres of land, some coal-fields through which the lines will pass, and 40,000*l.* per annum subsidy.

Asia.—*India.*—Transferring attention from Africa to Asia, we find little that need detain us until we reach India. Asia Minor has a few miles of railway near Smyrna; but the remainder of that wretchedly governed portion of the Turkish dominions is without such accommodation. Arabia has none; Syria and Persia have none; Russia is wisely constructing lines in the plains and valleys south of the Caucasus. Turkestan, Affghanistan, Beloochistan, all are without railways; and in the northern half of Asia, comprising Siberia, Japan, and China, the locomotive has scarcely yet been seen. The East India Company, in the days before the Mutiny, was not very ardent on the subject of railways. A doubt was entertained whether the natives would relish the mode of travelling, and whether the receipts from traffic would yield a sufficient return on the capital expended. A beginning was, however, made in 1845. The East India Railway Company and the Great Indian Penin-

sular Company were formed; the shareholders and other capitalists subscribed the capital; the Government gave the necessary land free, and guaranteed 5 per cent. dividend or interest on the cost for 99 years, in return for certain powers of supervision and control. All the railways in India, with a few minor exceptions, have been constructed on this system; and as the shares of the several companies are almost uniformly at a small premium in the market, the plan so far works well. If the gross traffic on any one railway does not yield sufficient net profit to pay the prescribed 5 per cent., the Government of India makes up the deficiency; but if, in subsequent years, the working yields more than 5 per cent., the surplus is handed over to the Government, in part payment of past advances. The Government retains a power of purchase at the end of 25 or 50 years, on terms laid down in the several agreements.

The chief Companies are the East Indian, Eastern Bengal, Calcutta and South Eastern, Oude and Rohilcund, Punjab and Delhi, Bombay and Central India, Madras, and Great Southern of India. The aggregate length, which was only 625 miles in 1859, increased to 2,963 miles in 1864; 4,261 in 1869; and 6,273 in 1874. The total cost has been about 97 000,000*l*., or 16,530*l*. per English mile. The East Indian, about 1,500 miles, connects Calcutta with the great cities of Benares, Patna, Allahabad, Delhi, &c. The Great Indian Peninsular, connecting Bombay with the heart of India, is the next in length— about 1,300 miles. The average receipts on all the lines are about 23*l*. per mile per week. The passengers conveyed somewhat exceed 21,000,000 a-year; and they pay about 2,200,000*l*. in fares. The goods' traffic is more than double that in passengers, realising 4,700,000*l*. A change was made in the system in 1869. Down to that time the lines had been constructed by Companies; but the Government formed an opinion that greater economy could be insured by keeping the ownership of any new lines in the hands of the State. Above 1,400 miles have been surveyed and commenced on the new system, and are by this time nearly finished. Only one-eighth of the railways are double; seven-eighths of the length being single line, with passing places at intervals. The English gauge, 4 feet 8½ inches, has never been adopted in India; the width is 5 feet 6 inches. A strong advocacy has been put forth, however, for a mètre gauge (3 feet 3⅜ inches), on the ground of greater cheapness, and because it would suffice for the traffic of districts hereafter to be accommodated. Several hundred miles are now being constructed on the mètre gauge. An important link is still wanting, to connect the Punjab at Mooltan with the Affghan frontier at Peshawur. Military authorities contend for the 5 feet 6 inch gauge, in order that there may be no break of gauge between the great cities and that strategical stronghold; while the civilians of the Government, recommending economy if it can be judiciously adopted, maintain that the mètre gauge will suffice for the purpose.

AUSTRALIA.—Our large and valuable Australian colonies have not been slow to assert their claim to rank among the encouragers of steam locomotion. The deposits of coal, gold, iron, copper, and tin; the meat, wool, hides, and tallow that result from stock-rearing; the steadily-increasing population and wealth—all tend to furnish them with an inducement to railway construction. *New South Wales.*—This, the oldest of the Australian colonies, planned its first railway in 1846; but the want of capital delayed the commencement of the works, while the discovery of gold in 1850 gave men's minds a new subject of excitement: so that it was not till 1855 that a line of 14 miles was opened from Sydney to Paramatta. The company that planned this railway raised the means to execute it; the Government purchased the line, and made it the first portion of a western railway, to extend across the Blue Mountains, and so on gradually into the grazing districts of the far interior. From Paramatta the Southern railway branches off towards the south, intending eventually to reach the frontier of the colony of Victoria; while another line branches off northward. All the lines belong to the Government. The rivers being liable to floods, the bridges and viaducts for carrying the railway over them involve heavy and costly works. Two viaducts across the Nepean have cost more than 200,000*l.* Another great work is the Lithgow Valley Zigzag, by which the Western railway descends the flank of a mountain in an extraordinary way. At one point the surveyors had to be lowered down the face of a cliff with ropes, to enable them to measure and stake out the line; and afterwards the contractor had to get the trucks and other plant carried up bit by bit on the backs of navvies, and then put together again. The colony borrows nearly all the money in England for paying the cost of the railways; and as nothing like a sinking fund has been established, the Colonial State debt is constantly augmenting. This is one of the drawbacks of the system; for the taxes have to bear increased interest as the loans increase. By the beginning of 1875 Sydney was connected, *viâ* the southern line, with Paramatta, Picton, and Goulburn; and *viâ* the western line with Penrith, Blue Mountains, Mount Victoria, Clarence, and Macquarie Plains (Mount Victoria station is more than 3,400 feet above the level of Sydney). *Victoria* being more populous and wealthy (although smaller in area), has been able to construct some of its railways through the instrumentality of joint-stock companies. Nevertheless the greater portion of the length belongs to and has been constructed by the Government. The main lines connect Melbourne with Geelong, Ballarat, Echuca, Sandhurst, and Belvoir, and extended (at the beginning of 1873) to an aggregate length of 458 miles. They had cost the very large sum of 11,675,000*l.*, exceeding 30,000*l.* per mile, an outlay that must have been mainly owing to the high price of materials and the high wages of labour; seeing that the land cost scarcely anything, and that the engineering works are not exceptionally heavy. The gross receipts, about

1,000,000*l.* per annum, denote a great trade in passengers and freight. There were nearly 400 more miles surveyed and partly commenced in 1873. *Queensland*, with more than double the area of New South Wales, but containing less than 200,000 inhabitants, cannot yet afford any large amount of railway enterprise. At the end of 1872, there were 218 miles of rail open for traffic, one line accommodating the Ipswich district (up the River Brisbane), and another the gold-mining district of Rockhampton. *South Australia*, distinguished by its enterprise in carrying a line of electric telegraph right across the continent from south to north, has not yet ventured on a proportionate extension of her railway system. At the end of 1872 the railways of the colony extended only 133 miles, from Adelaide to Port Adelaide, and from Adelaide to the copper mines which form part of the wealth of the country. *Tasmania*, or, (as it used to be called, *Van Diemen's Land*), had at the end of 1872 less than 50 miles of rail, from Launceston to Deloraine. Since that time an addition of about 120 miles has been pushed forward, from Hobarton (Hobart Town) to Launceston. *New Zealand* has not yet completed any great extent of railway, but a comprehensive scheme of State lines has been agreed upon; and Sir Julius Vogel, the Prime Minister of the Colony, has been in England in 1875, to complete the financial arrangements necessary for its fruition. *Western Australia* has hitherto had neither population nor commerce sufficient to need railways; nor are its natural productions sufficient to hold out any great expectations for the future.

Taking a view of the railways of the World collectively, it may be worth remarking that from Dover in the south of England to Thirsk in the north of Scotland, the narrow gauge rules. Ireland has an intermediate gauge of her own. Most of the continental railways have the 4 ft. 8½ in. gauge, in imitation of England; but a very narrow gauge of 2½ to 3½ feet is coming into favour for cheap local lines in thinly inhabited districts.

The year 1875 has been marked by the celebration of the jubilee of the railway system, which virtually commenced at Stockton and Darlington exactly half a century previously.

GEORGE DODD.

FOOD PRESERVATION.

THE annual report of the Veterinary Department of the Privy Council Office, published in September last, and other official returns during the year 1875, show that as compared with 1874, we have in the United Kingdom fewer sheep by over a million and a quarter, and fewer cattle by over a quarter of a million. This fact, coupled with the outbreak of foot and mouth disease, makes the prospect of every meat-consumer of limited means anything but a pleasant one; and, as the price of butcher's meat continues to rise, it is but natural that the question should be often asked, whether there is any reasonable prospect of the superabundance of sheep and oxen being brought to this country, either in a live or dead state, from our colonies or other countries, so that what appears to be the necessary consumption of animal food among us may not be seriously checked. As the thoughts of many turn in the direction of food preservation, as the most likely means of assisting us in our difficulties, the present may not be an inappropriate juncture at which to present to our readers some account of what has been done, and is still doing in reference to this most interesting and important matter.

Let us then at once go in *medias res*, and for convenience sake state that there are four principal methods, popularly speaking, by which food, and particularly animal food, has been and is still preserved with more or less success. They are—

1. Desiccation, or drying.
2. Refrigeration, or the application of cold.
3. The use of chemical agents, or antiseptics.
4. The application of heat.

Desiccation.—Taking these methods in order, let us inquire what the process of drying or desiccation has done towards a satisfactory preservation of food. In one sense it is hardly a scientific process of food preservation at all, and certainly not a satisfactory one in reference to animal substances which must be dried almost "to a chip" before they can be thoroughly resistant to the ordinary laws of decomposition. Still it is not altogether to be despised, as by it mankind has been enabled to utilise a large quantity of food which would otherwise have been wasted. Charqui, or South American dried beef, is not altogether an unsuccessful preservation, and its nutritive value is shown by the fact that it has been the staple article of food among the labouring populations in the tropical climates of South America for many years. Some years ago, Mr. G. Warriner, instructor of cookery to the army, expressed himself in high terms of this meat, and though the attempts to introduce it into this country have not met with any encouragement, we are inclined to think that it might be made an adjunct to our food supply. A few years ago, the Food Committee of the Society of Arts tested

some desiccated or powdered beef from Queensland, and after testifying to its keeping qualities and nutritious value, expressed an opinion that it was likely to become a very valuable article of commerce, and a cheap addition to our food resources. Unfortunately, as has been the case with many articles of food preservation submitted from time to time to the public generally, and gastronomic critics in particular, and spoken highly of, we seem to have heard little more of this powdered beef. The truth is, animal matter preserved by desiccation loses its flavour, and becomes tough and indigestible; the fat becomes rancid, and in damp weather, the meat absorbs moisture, and is liable to turn mouldy and sour. The above difficulties in connection with desiccation are to some extent obviated by mixing absorbent substances with fatty food, as in "pemmican," where sugar and spice are mixed with dry-powdered meat. A large quantity of this preparation was manufactured for the Arctic Expedition, which recently left our shores. Meat biscuits, such as those produced by Messrs. Peake, Frean, and Co., and others, are made on the same principle of farinaceous meal absorbing meat essences. Altogether there are in existence more than thirty patents in this country alone for the preservation of various articles of food by the processes we are treating of, but the result has not been commensurate with the labour and ingenuity expended on them. Among others who have worked in this direction is Dr. Hassell, who has applied a method by which meat may be preserved for a lengthened period in a dry state. He thoroughly dries lean meat by gentle heat, and then grinds it into coarse powder, which may be used for soup or biscuit-making. The late Dr. Edward Smith, an authority on many points of dietetics, says that this powder has the nutritive qualities of lean meat, though the aromas have vanished under the influence of heat; but he adds, that for separate use, the cost of preparation would prevent its sale in the market. He further states, that the drying of meat by artificial means may be more quickly effected over burning coals. M. Tellier, of Paris, adopts the following method:—He first rarefies the contained air by an air-pump to a tension of two or three centimetres of mercury, and then fills the vessel with carbonic acid, and again removes it as before. Afterward, he absorbs the carbonic acid by the use of a concentrated solution of potash, by which a very near approach to a vacuum is obtained. After leaving the meat thus treated for three days, it is removed, and may be kept sound, without any further trouble; but it will have lost from eighteen to twenty per cent. in weight. The process of desiccation is far better adapted to the preservation of vegetable substances than it is to that of meat; indeed, as applied to the former, it has achieved a very considerable success, and it may be added that housekeepers would do well to experimentalise on dried vegetables much more often than is now the case. In this country the first recorded patent for the preservation of vegetables was granted in 1780, to John Graefer, who dipped his articles in

boiling salt and water before drying them. In November, 1850, Masson obtained his patent for drying, and forcibly compressing vegetables, so that they were reduced to one-seventh their original size, a cubic yard containing rations for 16,000 men. The French, with M. Chollet at their head, have been very successful in this line of preservation, but many English houses now produce them in the form of chips, or of compressed cakes, such as Messrs. Whitehead and Co., of Lime Street Square, and Messrs. T. Gillon and Co., of Leith (London Agent, Mr. House, 70, Minories, E.). From America also dried vegetables are being imported at 1*s.* 6*d.* per pound, half an ounce being sufficient to add to a pint of soup. Considering the high price charged by greengrocers for vegetables, and the waste in utilising them in almost every household, housekeepers, even among the working classes, would do well to turn their attention to these dried vegetables, and at least give them a trial. When soaked and well boiled, they will be found not only economical in their use, but excellent in soups, and even in eating with meat in lieu of ordinary fresh vegetables. The process of drying eliminates little else but the water, which forms so large a part of the constituents of all vegetables, and takes from them little, if any, of their flavour. Vegetables dried in their natural form, according to M. Buchanan's patent, are also most excellent. It may be remembered that compressed vegetables, combined with dried meat, were largely used by the French and English armies in the Crimea; and still more recently, the well-known house of Ferré and Co., of 10, Glasshouse Street, Regent Street, supplied large quantities of the best compressed vegetables to the troops in the Ashantee expedition. Soup squares, or tablets, are a form of preserved food prepared partly by the desiccating principle. Most of them are compressed, but some are in the form of flour or grains, being composed of various substances, combined with powdered meat, or meat extracts. Among the first houses for these productions stands that of Messrs. Whitehead and Co., which offers an almost endless variety of soup squares, such as carrot, pea, chesnut, mulligatawney, &c.; also large cubes called "gargantua," after the mythical giant celebrated by Rabelais, one of which, dissolved in three pints of water, makes a most delicious *pot-pourri*, of four pound weight of nutritious food. This firm has also recently produced the squares of "army food," weighing one quarter of a pound, each cased in waterproof but edible covering. This makes almost an impromptu quart of excellent soup, meat and drink combined. Another prepared soup, pea-soup in packets, worthy of commendation, is that produced by Messrs. Lymington and Co., of the Bowden Steam Mills, Market Harborough. Its flavour is all that can be desired, and its nutritive value undeniable, being prepared with the pea-flour for which this firm is celebrated. In Russia, considerable attention is given to the various methods of desiccation as applied to food; and in the Food Section of the International Exhibition at South Kensington in 1873, that country exhibited some excellent

specimens of dried fish and vegetables, and soup tablets. In reviewing the general results of food preservation by the means we have been considering, we are inclined to think that as much has been done in this direction as is necessary. As to dried meat, though, as we have said, we think *charqui* might be utilised, there is no concealing the fact, that what the meat-eating public of this country require is not a desiccated form of animal substance, but meat in a more natural state; and if this is to be offered for general consumption in a preserved form, it would seem that we must look to some method other than that of desiccation to produce it.

Refrigeration, as applied to animal substances, with a view to their preservation, is an important subject, though, strictly speaking, a substance temporarily kept from decomposition by being surrounded by a temperature sufficiently low for the purpose can hardly be called "preserved food," as by this term is generally meant an article preserved in a receptacle, or otherwise, which is not subject to decomposition through atmospheric influences. The first patent for the preservation of food by refrigeration was taken out by John Lings in 1845; and since then a variety of expedients have been adopted, by the use of ice, and by artificial processes of lowering the temperature by evaporation, with a view to the importation of fresh meat from Australia, the American continent, and elsewhere, into this country. We have not space to enumerate these different contrivances, nor would there be any purpose gained by so doing, the object of all being the same, viz., to insure a sufficiently low degree of temperature for the preservation of the meat during the voyage, and to produce it at such a cost as would repay the importers. Experiments have been made in almost all parts of the world, *i.e.*, in the large meat-producing countries, in connection with refrigerators, and shipments of refrigerated meats have been made to this country from a number of ports with more or less success. One of the most interesting, and as far as it went, most successful experiments was made by Mr. James Harrison at the Melbourne Exhibition, 1872–73. Under the supervision of the Royal Commissioners of the Exhibition, Mr. Harrison constructed, on certain principles of his own, an ice-house in the building, in which he placed quarters of beef and halves of large sheep. The ice-house was sealed by the Commissioners, and at the end of forty days, when opened, the meat was found perfectly good, and when cooked and tasted by a number of competent judges, was not distinguishable from ordinary fresh-killed butcher's meat. Moreover, the meat after being taken from the ice-chamber kept perfectly good for seventy-five hours in a temperature of between 63 and 68 degrees, a fact which is contrary to the generally-received opinion, in this country at least, that meat which has been subjected to refrigeration decomposes more rapidly than that which has not. This may be the case with meat which has only been covered with ice, and when the temperature of the mass of the meat has only been as low

as barely 32 degrees, *i.e.*, just a little above the freezing point. Decomposition is said to go on at this temperature, though slowly, as the pieces of meat are still in a liquid state. By Mr. Harrison's system, any particle of moisture in the meat is converted into ice, and the little spicules of crystallised water can be seen scattered through it when it is cut with a knife; nor is there any disintegration or rupture of the elastic fibres of the meat by the freezing and thawing. The statement also that Mr. Harrison's meat had not lost anything in flavour by the process to which it had been subjected, is also somewhat contrary to the general belief among ourselves in reference to refrigerated meat, many good judges holding that the effect of cold is to lessen, if not to change the flavour of the substance, so that whilst it may be really good food, it does not fully equal recent fresh meat. Though perhaps game and poultry, and certainly fish deteriorate by being packed in ice, as any one can tell by comparing an "iced" mackerel with one which has not been iced, we are inclined to think that meat undergoes no perceptible deterioration from refrigeration, at least to ordinary taste. So confident was Mr. Harrison of the ultimate success of his method, and of its applicability to the importation of meat from Australia at a remunerative price to the importers, that he undertook to bring a sample of his iced meat to this country. For this purpose he had an ice-chamber constructed in the ship "Norfolk," and several tons of meat stored within it, and he himself sailed with his experiment from Port Philip in July of 1873. Unfortunately, the construction of the ice-chamber by the workmen employed was imperfect, and the ice supply failed before the voyage was little more than half over; and consequently, Mr. Harrison arrived in this country in the October following, without his meat, very much to the disappointment of all interested in the matter, who were anxiously expecting the result of his experiment. The success, however, of his method in Australia cannot be doubted; but it is a very different thing to conduct such an experiment on land and on board ship. As far as we know, nothing further has been done in the matter, partly owing, perhaps, to the increase of the price of meat, especially of beef in Australia. In the same year, however, successful attempts were made to bring iced meat to this country from Canada, under the supervision of Mr. James Whyte, and some beef, mutton, and turkeys, shipped at Quebec, were all that could be desired when brought to Liverpool; and, on another occasion, some gentlemen in New Orleans, interested in the subject, chartered a steamer, fitted with a cooling machine, and dispatched her to Texas for a cargo of fresh meat, which meat was reported to have arrived at New Orleans in a perfectly sound condition, after a voyage of five days in the tropical climate of the Mexican Gulf. In 1873, also, Professor Gamgee, whose name is well known in connection with all kinds of food-preservation, started a project under the name of the Fresh Meat Transport Company, for bringing to this country meat

from Belgium, Holland, Holstein, &c., in compartments aboard-ship fitted with compound tubular refrigerating machines, which would maintain the low temperature required. Then again, we have M. Tellier's method, by which he proposes to place (on shipboard or elsewhere) joints of meat in a chamber, through which a current of air, charged with ether or other volatile substance, may be passed, with a view to reduce the temperature, so that the vapour in the air shall be frozen, but the temperature not reduced below one degree centigrade, *i.e.*, about 30 degrees Fahr. Thus, he would not freeze the juices of the meat, but, by a low temperature, keep the chemical and vital actions at their lowest point. Again, not very long ago Mr. Poggiale, of Paris, brought this subject of preservation by cold alone before the Paris Academy of Medicine, and from his report, it may be gathered that in a chamber contrived on somewhat similar principles to that of M. Tellier, all kinds of butcher's meat and poultry had been hung for ten weeks, and that at the end of that time they presented themselves almost in the same state as if fresh from the butchers or poulterers. His observations were confirmed by a member of the Academy of Sciences, who, however, thought the poultry had lost a trifle in flavour from the preservation. These, and some other methods, inventions, and experiments, have for many years engaged the attention of scientific men and others interested in our food supplies; but it would seem that though many methods have been found to answer in the way of effecting the preservation of the meat, none have as yet succeeded in solving the problem of doing this at a cost which would not swallow up the profits of the undertaking. At least we may say practically, that such is the case, inasmuch as no supplies of refrigerated meat are as yet being brought to this country in the way of commerce, except during the cold season of the year. The whole question of refrigeration in reference to the transport of meat, resolves itself into one of cost, *i.e.*, the cost of producing and continuing the required low temperature for a given time. Hence all attempts to construct ice-making machines, which shall produce ice at a low cost per ton, and of all machines or inventions whereby a low temperature can be maintained in a meat chamber at a moderate cost, are to be watched with interest. Great progress has been made in this direction of late years, and inventors of machines maintain that they can produce ice from 10*s.* to as low as 3*s.* or 4*s.* per ton; one inventor boasting he can produce it at 2*s.* 6*d.* Into the merits of these different machines and inventions we cannot now enter, and those of our readers who desire further information in reference to "cold-producing" machines can consult the *English Mechanic* (XIII), where they will see illustrations of a variety of inventions for this purpose. Several new patents were also taken out in the years 1874 and 1875. An eminent dietetic authority, who took great interest in the preservation of meat, said, not very long ago:—

"The application of cold is, in my opinion, the most fitting

mode of solving the problem, and it should be effected either by inducing the inhabitants of countries where ice is abundant in the cold season, to grow animals for our markets, or by storing large quantities of ice in an economical manner at the ports of other meat-producing countries. We need not despair of seeing the time when the whole carcase of an animal will be imported in a state fit to be cut up in our shops for immediate sale, and when the exporters from Australia will supply themselves with ice for this purpose from the southern hemisphere, or when the pastures of the North American continent will become our chief, as they may be our nearest, sources of supply. Canada offers unbounded facilities for this purpose, by reason of its great ice-fields, its pastures, and agricultural population, as well as its nearness to this country; and should the present high price of meat continue, it will induce commercial men to organise a system, both of feeding animals and of exporting the meat in ice, which may be very profitable to the Canadians."

Whether his hopes are likely to be realised may be a question. We are inclined to think that there is a reasonable prospect that they will. It must be remembered, however, that fresh meat brought to this country by means of refrigeration must go into consumption at once; and therefore, as we have said, is not strictly speaking "preserved food."

Preservation of Meat by Chemical Antiseptics.—This has perhaps received more attention at the hands of scientific men than any other method, and experiments are almost daily being made in this direction. *Chloride of sodium*, or common salt, has been a well-known antiseptic from the earliest times for the preservation of animal substances; and it may be safely predicted that it will always continue to be so employed, either simply, or in conjunction with an after process of drying or smoking, or both combined. The truth is, that many substances so treated are extremely tasty and palatable, hams and bacon for instance, and the cost of the processes is little more than the value of time in carrying them out. But it must be remembered that salt by itself is only a temporary preservative agent, and is dietetically to be objected to, on the ground that it extracts the soluble constituents of meat, makes it hard and indigestible, and thus deprives it of its stimulating and nutritive constituents. From the eating of large quantities of salt meat, without the proper quantity of vegetables to counteract its effects, it is well known, that scorbutic diseases ensue. Other saline substances, as saltpetre, acetate of ammonia, sulphite of potash, and muriate of ammonia, are preservative agents, and have been from time to time the subject of several patents. The smoking of meat or fish by exposure to the vapour of peat, wood, &c., is chemically subjecting them to the action of the creosote of the empyreumatic oil of the smoke. But salting and smoking, though useful methods for the preservation of animal food, do not give us what we really want. They preserve food in a certain sense, but do not give us *fresh* food. What we want is fresh preserved

food, and especially meat, in a cooked or uncooked form; and if the use of chemical antiseptics can give us the latter in a presentable form, without the loss of nutriment, and without any unpleasant taste accruing from the process employed, and thus enable us to import fresh meat into this country, at a low rate, from countries where cattle can be bought at an almost nominal figure, the great desideratum will be achieved. We cannot say it is achieved at present. Much ingenuity has been expended on the subject; numerous patents have been taken out in reference to it; and in some instances a measure of success has been attained. As in the case of the preservation of meat by refrigeration, numerous inventors have said "we have solved the problem," so in this matter of antiseptics; but still, as a fact, we have no supplies of fresh meat being sent to this country in the ordinary way of trade, which has been preserved either by one method or the other. Not that it is quite right to class the two methods together as methods of preservation, for, as we have said, refrigeration is only a method of keeping meat for a limited time, either in our own houses or during transport. The refrigeration of meat is not a scientific result, so to speak, though scientific means for lowering the temperature in which it is temporarily kept may be employed. But the use of chemical antiseptics is a scientific method; and scientific inventors or adapters say that they can give us the required article. namely, fresh meat, which in consequence of having been subjected to their processes will keep good for any reasonable length of time, and that without any detriment to its appearance, taste, or nutritive value. We wish we could say in sincerity that we believe any one person has "solved the question," even independently of the cost of the preserving process in reference to meat transport. The fumes of burning sulphur (sulphurous acid) are powerfully antiseptic, and many patents have been taken out for their employment in the preservation of food, for instance, that of Laury in 1854. Later in the same year, Bellford received a provisional protection for the use of sulphurous acid with about one-hundredth of its volume of hydrochloric acid, the object being to prevent the sulphurous acid combining with the alkaline salts of the meat, and so giving it an unpleasant taste. Other patents followed for the use of the acid in a gaseous form; and in the specification of Demait it was directed that the substance should be preserved by hanging it up in a chamber and exposing it for a time to the action of the gas. Professor Gamgee recommends that the live animal should be made to inhale carbonic oxide gas, and that when it is nearly insensible it should be bled in the usual way. After the carcase is dressed, it is to be suspended in an air-tight chamber, which is to be exhausted of air, and then filled with carbonic oxide gas, to which a little sulphurous acid has been added. It is to remain exposed to these gases for twenty-four, or even forty-eight hours, and is then to be hung up in dry air; after which, it is said, that the carcase will keep for many months without perceptible change in taste

or appearance. Those who, like Dr. Johnson, often "take a walk in Fleet Street," may have noticed from time to time, hung at the door of a well-known shop, the carcase of a pig, labelled "A Perfect Cure." The cure has been undoubtedly perfect, and caused by the inhalation of some chemical before, or its injection at the time the animal has been "stuck," which has been powerful enough to permeate the entire frame, so that the bones, hoofs, and even the hair of the animal, have been impregnated with it. The only fault is that the cure has been too perfect, the flavour of the chemicals being traceable in the taste of the flesh, which is immeasurably inferior to the taste of good Yorkshire ham or Wiltshire bacon. In Mr. George's process, which is (or at least was, a few years ago) in use in La Plata, the meat is partially dried, and then steeped in successive waters containing hydrochloric acid and sulphite of soda. Instead of covering the meat with the solution, it may be injected with it, as in the patents of Long (1834), Horsley (1847), Murdoch (1851), and others. But by far the most important chemical antiseptic for the preservation of fresh meat yet practically applied, seems to be the bisulphite of lime, manufactured by Messrs. Bailey and Son, Wolverhampton. This patent solution is undoubtedly of great efficacy, and is much more widely used for the temporary preservation of meat in this country from atmospheric influences than is generally known. Much of the meat sent from Aberdeen and distant provincial districts to London, in the summer months, is dipped in or painted with this solution before being packed, and a large number of first-class butchers in the metropolis, and elsewhere, have not hesitated publicly to state, that they constantly use it, and with excellent effect. It may be safely said, that for the temporary preservation of meat it is a most reliable agent, and that the meat subjected to its influence only for a few days is not affected either in look, taste, or nutritive value. But whether the bisulphite of lime can be successfully employed as a preservative agent for meat during a voyage through the tropics is another question. Records of experiments would lead us to believe that it can. For instance, as may be seen stated in the money article of the *Times* of December 10th, 1870, there was a trial before a large and influential meeting in the City, of meat from Rosario, in the Argentine Republic, preserved by Bailey's solution. The barrel in which it had been packed had been sealed on the 10th of August by Mr. J. T. Hutchinson, Her Majesty's Consul at that place, and it was brought by him to London, and on the 7th of December opened in his presence at the trial. "It had," says the *Times*, "been kept four months, and had made a passage across the line, but was found perfectly fresh, not only in quality but in appearance, and was deemed by persons present at the trial equal to any good ordinary beef." Other experiments have also been made with the bisulphite of lime, and its value testified to by the Society of Arts, by the late Mr. Ede, of Her Majesty's Victualling Yard, Deptford, and by the eminent analytical chemists, Mr. W. L

Scott, and F. L. Sonnenschein, of Berlin. Still, after all the apparently satisfactory experiments with the bisulphite of lime, the fact remains that, up to the present time, we have no fresh meat being sent to the English market preserved by this process. Within the last two or three years also we have had other "trials" in London of meat preserved by antiseptics. There has been M. Sacchi's method of the use of acetate of potash; the chloralum process; Bolleter's carbolic acid process; Kock's process; and those of Goulstone and Leowy; all certified to be more or less satisfactory; but here we are near the close of the year 1875, and yet no fresh meat is sent us from foreign meat-producing countries preserved by antiseptic processes. We must confess that we have no great hope of the question of meat preservation being satisfactorily solved in this direction; but, at the same time, we would express a hope that scientific men will persevere in their efforts, especially as chemical knowledge is yearly making great advances. We may add that, as recently as October 13th, 1875, a consignment of beef and mutton from Melbourne was received and opened by the Food Committee of the Society of Arts. The separate joints had been wrapped in prepared calico, and packed in tin-lined cases with charcoal. Unfortunately the whole was found in an advanced stage of decomposition.

Preservation of Food by the application of Heat.—We now come to the most important part of our subject. This has been the most successful method yet discovered, and practically applied. By this, for many years past, meat in tins has been prepared for the Royal Navy and Merchant Service, and a great part of the beef and mutton put up for the Arctic Expedition in the spring of 1875 was thus preserved. In a scientific treatise, which this paper does not profess to be, the method of preservation by heat would more properly be a subdivision of the method of preservation by "Exclusion of Atmospheric Air," but for all practical purposes the application of heat is the only method which can be relied on to thoroughly effect this exclusion of air. This is effected by the expulsion of the generated steam, whereby a *vacuum* is created round the substances preserved in tins or other vessels. Hence the method is called "preservation *in vacuo*." The first simple process consisted in putting meat with a charge of water into a tin case with a small aperture or "pin-hole" at the top, and then placing it into boiling water nearly up to its top, and when the steam had displaced the air, stopping the hole with solder. This process dates as far back as 1820; but the first patent for it was granted to M. Augilbut in 1823. An improvement was effected by Wertheimer in 1840, and again by Gunter in the following year, when Goldner and Wertheimer obtained patents for using a bath of muriate of lime for heating the vessels. This is called the chloride of calcium process. But it is only fair to give M. Appert, of Paris, the credit for first preserving meat by the application of heat in 1810, though he did not use the "pin-hole: and Messrs. Doubin

and Gamble were, we believe, the first English firm which made a business of preserving meat on this principle. This is not the place to enter into a discussion whether the presence of oxygen is the sole cause of decomposition, or whether this is brought about by living microscopic germs. Whether preservation by heat is effected solely through the expulsion of atmospheric air, or by the actual destruction of the microscopic germs, it may be taken for granted that, without a perfect expulsion of the air, and the creation of a perfect vacuum in the vessels, preservation is not effected. A moderate degree of heat, such as that of boiling water, is not sufficient to expel all the air from the vessel, and effect a perfect vacuum for preservation. Hence an extra temperature is required.

There are four methods, in a certain sense distinct from one another, of applying heat to the vessels, and perfecting the preservation of their contents.—1. The ordinary Aberdeen process; 2. The Steam Retort process; 3. The Chloride of Calcium process; and 4. Jones's Patent Vacuum process. The older or ordinary Aberdeen process is carried out as follows:—The raw meat, with or without a small quantity of fluid, is placed in tins which are soldered down perfectly air tight. These are let down on iron frames or "gridirons," by means of pulleys into baths of boiling water, raised to a higher temperature by the addition of salt, and kept there for a certain time, according to the size of the tins; the first bath of a 6 lb. tin, for instance, requiring two and a-half hours. At the expiration of this time they are removed, and placed on a table near the bath, and the expanded air and vapour are let out through a minute aperture in the lid of the tin. This is done by one of the workmen touching with a hot iron the small piece of solder, placed over the aperture or "pinhole" originally made in the lid. The steam at once rushes out, but within a few seconds, another workman follows and again solders down the "pin-hole." This part of the process is, in the vernacular called "brogging." The tins are then returned to the boiling brine, for the same time as before, when they are again "brogged." Once more they are returned to the bath, and afterwards withdrawn, and stood to cool, and the process is complete. It may be here mentioned that some of the beef and mutton is partially baked or roasted before being placed in the tins, and there are labelled, as "roast" beef and mutton, as distinguished from the boiled, though the difference practically when tasted, is very slight. The steam-retort process as adopted by Messrs. Hogarth, who have by it preserved from time to time a large quantity of meat for our Government at the Deptford Victualling Yard, consists in placing the tins, with the "pin-hole" open, in what might be called a steam tight retort, into which steam is allowed to pass, producing a pressure of something like 230 degrees. After an hour and a-half or two hours, they are taken out, and the "pin-hole" soldered down. They are then placed in the retort for an hour, or an hour and a half, at a temperature of about 240 de-

grees, and then taken out and cooled. The chloride of calcium process consists of placing the tins, with the "pinhole" open, to about half or two thirds their depth, in a bath of solution of chloride of calcium, by which a temperature may be gained of from 260 to 270 degrees. This temperature is only gradually arrived at, and for three or four hours the steam escapes from the tins at the "pinholes." The tins are then soldered down, but are continued in this bath for a further period, before they are taken out to cool. In carrying out the above briefly described processes, manufacturers may vary a little in details, some using a higher temperature than others, or not subjecting the tins for so long a period to the hot-baths, or modifying the operation of "brogging," or introducing other slight modifications which do not really affect the main principle of these methods of preservation by heat. The chief feature of the patent vacuum process of Mr. Jones is that each tin as it stands in the hot-bath is connected by a tube with a vacuum chamber, and that the steam and moisture is from time to time suddenly drawn off from the tin by turning a tap connected with the chamber. The advantage of this process is that a vacuum is created in the tins more quickly than by the other heat processes, and thus the necessity of overcooking their contents as in the other methods, in order to obtain a perfect vacuum, is to a great extent obviated, and the meat turns out more solid. This comparative complication, however, of Jones's process and the difficulty in its manipulation, coupled with the fact that the weight of the contents of the tins is so greatly reduced by the absorption of the moisture, have militated against the adoption of the patent by meat-preservers generally, though many of them fully acknowledge its superiority to other methods in the food preserved by it.

Such are the several processes, differing somewhat in detail, but substantially the same in principle, by which preservation by heat is effected. It is by one or other of these, with certain trifling modifications, adopted by this or that manufacturer, that almost all the solid meat, fish, poultry, vegetables, soups, stews, the variety of "odds and ends," such as kidneys, tripe, sausages, minced meat, and the several "made dishes," both in this country and abroad are preserved; and it is by heat alone, that it can fairly be said the food preservation question has "been solved," and then only in a certain modified sense. By all the above heat methods, however, preservation—simply as preservation—is perfect. As long as the tins or other receptacles, in which meat or any other substance has been successfully preserved by the creation of a perfect vacuum, remain sound and air-tight, so long will their contents remain sound also. Tins with the meat perfectly good in them, though preserved nearly fifty years ago, are still in existence. At the London Exhibitions of 1851, 1862, and 1863, tins of meat which had been "put up" from twenty-five to forty years before, were exhibited and tested, and were found perfectly sound. Stores of preserved meat, &c., in tins have been left in the arctic regions for years, annually exposed

to a temperature of ninety-two degrees below and eighty degrees above zero. They have been brought back to this country, and the contents of the tins found to be as sound as the day they were put up. As a matter, then, of mere preservation, the heat processes are an unquestionable success, and by their agency, we have in this country been able to obtain a large supply of sound, edible, and cheap, beef and mutton from the very ends of the earth.

The preserved meat in tins with which the English public has become most familiar during the last few years is sent to this country from Australia, New Zealand, and South America; but a certain quantity is put up by the Scotch preservers for the foreign market. Now it cannot be denied that the "tinned" meat from abroad though sound and wholesome has failed to secure that popularity for itself which was at one time anticipated, though a large quantity has actually gone into consumption. The official statistics of the importation of this meat are interesting. In the year 1866 only 4½ tons were imported, value 32*l*. In 1869 the official returns of the Board of Trade showed 1,415 tons, value 80,385*l*.; and in the following year 3,641 tons, value 203,874*l*. It was about this time that the question of preserved meat, of which it seemed that any quantity could be supplied at a reasonable figure, attracted considerable attention. It was taken up very warmly by the press, and philanthropists in all parts of the kingdom, in the hope that a valuable and cheap addition to the meat diet of the middle and working classes—indeed of all classes—had been secured. The public was, at all events, urgently advised to make a trial of the meat, and to endeavour to form an unprejudiced judgment on it. The interest thus created led to increased imports, and in 1872 no less than 17,601 tons, value 906,680*l*. came to this country. In 1873, however, there was a considerable falling off, the returns showing only 13,016 tons, value 733,848*l*.; and in 1874 only a slight increase is observable, the imports being 13,270 tons, and the value 751,209*l*. The value of the imports for the eight months of 1875, ending August 31st, is returned as 418,451*l*.; and therefore it is more than probable the importation for the whole of 1875 will show a decrease even on the two previous years. It would thus seem that the consumption of tinned meat in this country is not progressing, if indeed it is not retrogressing, for on reference to the returns just given it should be remembered that a very appreciable portion of the imported meats have recently been taken by the French Government for military stores. On the other hand the decrease in imports is partly to be accounted for by the fact that the great majority of the meat-preserving establishments in Australia and New Zealand have for the last year or so ceased working, owing to the increased price of cattle and sheep in the colonies, especially in Australia, where the stocking of new runs has made them comparatively scarce near the home stations. Unless the meat-preserver in Australia can get his meat at about 1½*d*. per lb. he

cannot put it up so as to realize a profit in this country at the price the public will consent to give for it. In the year 1875 there was little preserved beef in the English market, and mutton ruled, retail, about 6*d.* per lb. in large tins and 8*d.* per lb. in small tins, and beyond this the buyers will hardly go. For various reasons, and mainly because of its overcooked state, preserved meat does not make its way, and among the working classes there is a large amount of most unreasonable prejudice against it. Still, with all its imperfections, we hold that it might be much more widely used than it is; for even if it is admitted that mouthful for mouthful it is of less nutritive value than butcher's meat, yet the latter after the deductions in weight for cooking and bone costs really about twice as much as the preserved meat. At the present time, speaking in round numbers, the live stock of Australia and New Zealand amounts to sixty million sheep and six millions head of cattle, or thirty sheep and three head of oxen per unit of the population of those countries; while in the United Kingdom the number of sheep is barely at the rate of one animal to each head of the population. Other countries too, such as South America, the districts of Texas and Oregon, and the dominion of Canada, abound with cattle of comparatively little value where they are produced. It need hardly therefore be insisted on that if some method of preserving meat in a more acceptable form than that now presented to us were devised, the English public would receive an estimable boon. We will still hope that one or other of the heat process may be so improved, or a new application of the principle hit upon that before long this desirable result may be attained.

But if the objection of "overcookedness," is to a certain extent a reasonable one in reference to the tins of nominally solid beef and mutton, it certainly does not apply in anything like the same degree to the other forms of preserved meat, such as stews, hashes, minces and soups, which are sent to us from Australia and elsewhere and sold at a very cheap rate. Many of these are most excellent and might be used even by the poorer classes with advantage, as there is no waste in them. We would, therefore, advise our readers to take the trouble to look through some of the trade lists of the firms mentioned in different parts of this paper, and to use more enterprise in making themselves acquainted with the contents of the tins shown in almost endless variety in so many shop windows.

In addition to beef and mutton, soup, stews, and made dishes, the heat processes have been applied to the preservation of poultry, fish, vegetables and fruit. The observations made on preserved meat will in the main apply to poultry and game, which by the ordinary heat processes suffer like the meat from overcooking, and are thus rendered somewhat soft and insipid. Fish is preserved fairly well by the heat processes, though it has a tendency to become soft and pulpy after being in the tins for some time, and therefore it is better eaten within a reasonable period of its preservation. Preserved salmon, however, seems to stand better

than any other fish, and hence its enormous and daily increasing consumption in this country. A few years ago it was put up in considerable quantities by the Scotch firms at Aberdeen, as at certain seasons of the year it could be obtained at a very moderate cost. But the Scotch is now almost supplanted by American salmon, which is put up in California, Oregon, New Brunswick, Salvador, and in other districts where it can often be bought by the preservers at one penny per pound. This salmon in tins is retailed in ordinary shops, from eightpence to a shilling per pound, according to the popularity of the "brand" and the position of the firm whose label is attached to it. There are some brands, however, to be obtained at a much cheaper rate, and at the same time are quite equal to those for which a higher price is asked. For instance, there are on the trade list of Mr. J. T. Morton of (107, Leadenhall Street, E.C., and Aberdeen) several cheaper brands, notably the "Eagle," a most excellent salmon, which can be retailed at sevenpence halfpenny per pound. The best way of dealing with the tinned salmon is to stand the tins, their tops having been previously cut off, in boiling water till the contents are warmed through, for it must be remembered that they are already thoroughly cooked ; or it may be made into "fish-cakes." Good preserved salmon will turn out whole, and so excellent is it that it takes a good judge to distinguish between it and the fresh cooked fish. It is certainly a very valuable addition to our food supply. The preserved herrings put up by Mr. Morton, are very delicate eating, and very cheap. The preserved bloaters, kippered herrings, and Finnan haddock in tins, are also well worth keeping in stock, to fall back upon in emergencies. As having a gastronomical affinity to salmon, preserved lobster is deserving of special notice. An enormous supply of this fish comes to this country, perhaps not far short of 80,000 cases of four dozen tins each, being imported annually from America. The fish are caught chiefly off the coasts of Maine and Nova Scotia, and in the estuary of the St. Lawrence, and are put up by various houses in New York, Boston, Baltimore, Halifax, and elsewhere. A good fish can be got for a few pence even in American cities, and it is seldom one fetches as much as one shilling ; hence a pound tin can be retailed in this country with a good profit at from eightpence to tenpence. Mr. Morton's "Eagle" lobsters can be retailed at sevenpence per pound. Now when we reflect that the actual weight of meat obtained from a lobster bought at an ordinary English fishmonger's, costs the purchaser at the rate of from two shillings to three shillings per pound, the advantage of tinned lobster, though it may have lost somewhat of its flavour in the preserving process, is obvious ; and a meal of preserved salmon and preserved lobster sauce is consequently a very cheap, as well as a very palatable and nutritive one. The preserved lobster is also available for scallops and salads. We cannot speak so highly of preserved oysters, as we have of the salmon and lobsters. The oyster is a very delicate fish, and its

flavour is certainly impaired by the overcooking it is subjected to in the tins. It is, however, passable for sauce and scallops. A tin of oysters containing about three dozen can be retailed at about sevenpence and eightpence ; and on Mr. Morton's list the "Kensett Cove" are quoted at a price which would enable them to be retailed at sixpence.

Vegetables preserved by heat are well worthy of attention. Common kinds, such as carrots, turnips, onions, parsnips, &c., are put up in large quantities by such houses as that of Messrs. J. McCall and Co., of Houndsditch, and the Aberdeen firms ; but chiefly for shipping purposes and exportation. Re-warmed they are hardly distinguishable from ordinary fresh cooked vegetables ; and on considering the high price of the latter at our greengrocer's, and the fearful waste of them in most households, we think that those preserved in tins might often be used with advantage, to say nothing of the convenience of having a few tins in stock. But it is to the French preservers, the disciples of M. Appert, of Paris, who, more than fifty years ago, introduced the method of preserving vegetables by heat, that we look for the best productions in the higher classes. The credit of introducing these articles to the English public must be mainly given to the well-known house of Messrs. Ferré and Co., of Glasshouse Street, Regent Street. Beans, celery, spinach, artichokes, asparagus, and especially tomatoes, are so well preserved by the best French manufacturers—they lose little or nothing of their flavour, and may be served by good cooks to the most critical company ; while for soups, entrées, stews, and also for garnishing the tins of *macédoines* (mixed vegetables), are found most useful. But of all the vegetable preserves the green peas hold the highest place. The best are preserved without any use of copper, their colour being retained, or rather restored, simply, we believe, by a little spinach juice ; but we may remark, by the way, that the use of an almost infinitesimal quantity of copper, which cannot possibly be injurious to health, has somewhat unfairly been made the subject of prosecutions, under the Adulteration of Food Act of 1872. The "brands" of these peas are very numerous, but it may be safely said that the "Globe" brand of Messrs. Ferré and Co. has attained the highest position in the trade, and is well known in almost every part of the world. The art of preserving peas has now reached so high a point of excellence that it is almost impossible to distinguish them from the fresh gathered and fresh cooked vegetables—indeed just as new peas come in, and during the pod season, those from the tins are consumed in enormous quantities at first-class hotels and restaurants in London and all continental cities, and at the tables of the wealthy classes, without anybody but those who provide them being the wiser. The fraud, if such it may be called, is a very harmless one, and confers a benefit on pea-eaters, who are ensured against a dish of hard, flavourless pellets during the pea season. American preservers now send us large quantities of preserved tomatoes, a vegetable (perhaps we

should almost say "fruit") daily found in some form or other on every dinner table across the Atlantic, but strangely neglected among ourselves. They are perhaps somewhat inferior in flavour to those produced in the south of France, but their cheapness would recommend them. From America also we get tins of "green corn" and Indian maize cooked in its "milky" state before it is ripe, a still more indispensable article on American dinner-tables. Green Lima beans are another preserved vegetable sent from America, retailed in 1lb. tins at about 1*s.*, and very excellent they are, but like the "green corn," seldom experimented upon by the English public, being chiefly used by American residents in this country. From the above remarks it will be seen that we consider no small amount of success has been achieved in the way of preserving vegetables by the application of heat.

This remark will also apply to the preservation of fruit by the same means. In this matter the Americans again are to the front, sending us yearly hundreds and thousands of tons of the various products of their gardens and orchards. In many parts of America, California for instance, which seems likely to become "the garden of the world," fruit is a mere drug in the market, the supply of peaches, apricots, and pine apples, to say nothing of what we consider more common fruits, being almost unlimited. They are now seen in most of our shops, which would naturally deal in such articles, and very rightly have established themselves in public favour, their excellence and cheapness entitling them to it. The Australian Colonies are also fast developing their powers of fruit production, and both the quality and cheapness of their preserves of various kinds which have already found their way into our markets commend them to the public.

Among the specialities offered by various food preservers at home, or by the agents of foreign establishments, most deserving of commendation, may be mentioned the prepared turtle from Australia, and turtle meat (Callipash and Callipee) in tins, which requires "stock" added to it. These are to be found on the trade lists of such firms as that of Messrs. John McCall, of Houndsditch, the agents for the Melbourne and Western Meat Preserving Companies. They are most excellent, and their price is comparatively insignificant when contrasted with the regulation guinea per quart article charged by several well-known establishments, which cater for public dinners and the requirements of the City Corporation. A most successful attempt at presenting a luxury to the public in the form of preserved food has resulted in the tinned Paysandu ox tongues, which of late have been very conspicuous among the miscellaneous commodities in the shops of grocers and provision dealers. They are put up by Messrs. J. McCall and Co., on their own account, at their manufactory, established for this purpose at Paysandu, Uruguay. They are unusually firm for preserved meat put up by a heat process, and their flavour is most acceptable, while the

low price at which they are retailed makes them compare very favourably with ordinary English ox tongues. The demand for them has become so great that Messrs. McCall will put up about 200,000 of these tongues in the first six months of next year. They are obtained from the cattle slaughtered mainly for their hides and the fat produced from their bodies in the melting-houses. The various forms of preserved rabbits—boiled, stewed, curried, and fricasseed,—are among the best specimens of meat preservation sent from Australia. They are put up by the Western Company (Colac), for which, as we have said, Messrs. McCall are the agents; and considering how excellent they are, a tin of 2lbs., at about 1*s.* 6*d.*, is a very cheap dish. Among other miscellaneous food preservations the spring lamb, stewed kidneys, and honey-cured mutton hams (on the trade list of Mr. Tallerman's Company, 113, Cannon Street, E.C.), are well worthy of mention. But perhaps the best specimens in the way of food preserved by heat are the curried fowls and rabbits put up by Mr. J. Halford, of 12, Upper St. Martin's Lane, W.C. Samples of the former were exhibited at the International Exhibition of 1873, and in various reports on the Food Section received special commendation. Mr. Halford acquired the art of compounding curries in India, where he held the post of *chef* to Lord Dalhousie, the Governor-General. His preparations are not produced with the ordinary curry powder as sold in our shops, but with a mixture of ingredients according to his own recipe, manufactured expressly for him both at Madras and Calcutta, and sent to him in hermetically sealed tins; and hence they have a freshness which is lacking in curry prepared in an ordinary English household. A large supply of his curried fowl was obtained for the Arctic Expedition as soon as the provisioning of the "Alert" and "Discovery" commenced, and a further supply was ordered within a few hours of the sailing of the ships, in consequence of the general approval the preparation met with when a few of the tins were tested. The curried rabbit seems likely to be even more popular than the fowl, as the flesh is firmer and the price of the preparation less, a tin of 2lbs. of rabbit being retailed at about three shillings. If space permitted we could mention several other successful preservations; but we will leave it to the public to make further investigations on their own account.

An article like the present, which professes to deal with the whole subject of Food Preservation, as far as such a subject can be dealt with in a limited space, would be by no means complete without a special notice of Preserved or Condensed Milk, of which preparation it may be truly said that it is a complete success. It is a familiar object in the shop windows of those who deal in such commodities in every part of the United Kingdom, and its value is acknowledged by thousands of households in which no other form of milk is used. For some years the only kind of preserved milk known was *desiccated* milk, but the process by which this was obtained destroyed some of the essential

constituents of the original substance, and thus detracted from its nutritive value. M. Appert, to whose ingenuity and perseverance in the cause of food preservation attention has been more than once drawn, recommended that milk should be boiled down to about half its bulk before putting it in bottles; and in 1847 Bekaert tried to improve the process by adding carbonate of soda. Later still, in the same year, Martin de Leignac, a Frenchman, obtained a patent for preserving milk by evaporating it to one-sixth of its bulk. It was probably this process which Mr. E. D. Moore, a medical man attached to our Court, adopted in this country. In 1857 Mr. House, of 76, Minories, London, on the retirement of Mr. Moore, whose manager he had been, took up the business on an "improved patent." He has continued to manufacture his article ever since with great success, though he has confined himself mainly to the shipping trade. It was from Mr. House, through a Captain Fletcher, that Mr. Gail Borden, of New York, got his idea, though he conducted his evaporation of the milk in closed vacuum pans, whereas Mr. House used open pans. It was with Mr. Borden's process, and perhaps with some improvements on it, that several American gentlemen established a milk preserving manufactory at Cham, in the Canton of Zug, in 1866. The product of this manufactory has ever since been well known to the English public as the "Anglo-Swiss Milk," and has most deservedly established for itself a world-wide reputation, finding its way as it does to the very remotest countries, as well as being largely consumed among ourselves. In 1870 a company was established in this country under the name of the "English" or "Aylesbury Condensed Milk Company," and being composed of some of the old members of the Anglo-Swiss Company, became in a certain sense rivals to it for public favour. Their first factory was established at Aylesbury, and they afterwards added another at Middlewich, in Cheshire. Thus the English public had offered to them the two well-known "brands"—the "Milkmaid" of the Anglo-Swiss, and the "Lion" of the English Company, to say nothing of one or two other brands, the products of other companies, both abroad and in the United Kingdom. Recently, however, the Anglo-Swiss Company has acquired the business of the Aylesbury Company, with its factories at Aylesbury and Middlewich, and thus with its two factories in Switzerland, one in Germany, and one at Chippenham, in Wiltshire, it has no less than six establishments for the manufacture of condensed milk. It is satisfactory to find that the disappearance of the Aylesbury Company has not led to any material increase in prices, and that the one pound tin of milk prepared in England is obtainable for about 6½*d.* or 7*d.*, while that prepared in Switzerland, owing mainly to the greater demand for it, rules only a trifle dearer. The Anglo-Swiss Company also continues to manufacture the combined coffee and milk, as originally introduced with so much success by the Aylesbury Company.

The method of condensing and preserving the milk is sub-

stantially the same at all the manufactories. The writer of this article has watched the process from beginning to end, on more than one occasion, both at Aylesbury and Middlewich; and it may be thus described. Steam is got up about six in the morning, and the farmers who live within from one to ten miles of the factory begin to deliver their milk about seven o'clock, and it is nearly nine before the last arrives. The milk is emptied at once from the large tin cans generally used in the trade into a trough, which conducts it through seives into a large tank, holding about 800 gallons, in the department where the first part of the process takes place. From this tank it is drawn into large open metal cylinders, which are slung up by a crane, and placed in a hot-water bath, in large tanks, somewhat after the manner of the tins of meat in the chloride of calcium process, as adopted in the preservation of meat. After remaining in the bath some time, they are again lifted by the cranes, and empted into large, open, funnel-shaped vats, whence the hot milk is drawn up, through a pipe in the centre, into the condensing pans on the upper floor. Sugar having been mixed with it, solely, let it be remarked, for the purpose of preserving it, it remains in these pans, subject to a somewhat low heat, for two or three hours, while the evaporation of the water is taking place, and the milk gradually becoming condensed. When this part of the process, which may be watched through the glass window of the condenser, is completed, the milk, now about the consistency of liquid honey, returns by a pipe into a lower room, and is received again into the open cylinders, which are swung into the central tanks—this time filled with *cold* water—for the purpose of cooling. The regulation of the temperature during the whole of these processes is a matter of the greatest nicety, and of the utmost inportance, in securing success. After cooling the condensed milk, it is taken to the "filling" room, and run into the tins, which are at once soldered up and packed in cases ready to be sent to their different destinations. The condensed milk gradually thickens in the tins, becoming slightly more consistent up to five or six months, after which it remains of the same consistency, and will continue sound and good as long as the tin remains perfect.

It will thus be seen the condensed milk is simply natural cows' milk, from which a certain proportion of water has been abstracted, and to which a certain quantity of sugar has been added. Speaking in round numbers, it may be said that of cows' milk 85 per cent. is water, but, as has been demonstrated by evidence given at various prosecutions under the Adulteration of Food Act, during the last few years, the relative proportion of water and solid matter will vary according to the variation of the breed of cattle, their age, pasturage, food, climate, and the seasons of the year. Ordinary milk, according to Professor Wanklyn, consists of the following proportions:—water 87·19 and solids 12·81 = 100. Condensed milk, according to Baron von Liebig, shows—water 22·44, solids 77·56 = 100. The

process of condensing, or, as it might be called, evaporising milk eliminates the greater part of the water; and the further analysis of the condensed milk shows that the casein, butterous or fat, and other solid and nutritive particles remain intact in their original form. Thus we have an article which is, in reality, *pure* milk with the addition of a little sugar in order to preserve it, and not an article made *from* milk. Any introduction of a foreign substance, in the way of adulteration, would at once cause the milk to decompose, and we believe we are quite correct in saying that no attempt has ever been made to adulterate this article. When the contents of a tin are found to be unsound, the cause is to be sought in the failure in making a particular batch of milk, always a most delicate operation, or in some imperfection in the tin, owing to which the external air has been admitted. Baron Liebig, in his recorded analyses of the Swiss milk, says, "It consists of nothing but cows' milk and the best refined sugar, and possesses all the properties and qualities of a perfectly pure milk;" and Dr. Hassall, and other eminent analysts, certify to the same effect. But it is in the power of anyone to test the condensed milk without the aid of chemical appliances. If sufficient water is added to the condensed milk to bring it back to its original state—*i.e.*, to re-establish the original proportion between the water and other constituents—cream will rise from it in the ordinary way; only it must be stood in open, flat vessels, and not in high glass columns, called, "graduated test tubes," because the sugar, to some extent, prevents the cream readily rising. Again, if the condensed milk, mixed with the proper proportion of water, be raised to a temperature of 70 degrees, it will churn into butter like ordinary milk.

Each one pound tin represents the condensation of about two quarts to five pints of crude milk, and therefore will bear so much water added to it to bring it back to its original condition and bulk. In each tin there is about four ounces of the best refined sugar. Now, putting the value of the sugar at one penny, and the milk at tenpence, we get for sevenpence or eightpence what otherwise would cost us from elevenpence to one shilling, simply because the manufacturers in country districts can obtain the milk at about twopence per quart. Of the convenience of the article it is hardly necessary to speak. It is invaluable for travellers by land and sea, as the crews of the Arctic expedition have by this time doubtlessly experienced. Nor is it less convenient as an article for ordinary household consumption, while the certainty of its genuineness adds much to its value. It can be used for any purpose for which ordinary milk and sugar are used—for puddings, custards, and other culinary requirements; it is admirably adapted for eating with fruit tarts, as Devonshire cream, and, with the other usual ingredients, makes capital salad dressing. Less than a teaspoonful, without water, is sufficient for a cup of tea, while four or five times that quantity will make a basin of sweet bread and milk for a child. It is almost im-

possible to exaggerate the value of this milk for infants and children, especially during the prevalence of infantile diarrhœa, which, in the opinion of the majority of medical men, is to be attributed to the badness of the milk supplied to the poor in large centres of population. Many medical men and mothers who have had the courage to try the condensed milk for infants, when the natural sources have failed, can bear testimony to the fact that infants will thrive well on nothing but the condensed milk for many months. Dr. Cuibourt, of the French Academy of Medicine, says that cow's milk, with the addition of one-fifth of its weight of water and a little sugar, is as nearly as possible the same as woman's milk, and has, moreover, the advantage of being a well-known substance easy to be administered. It follows, therefore, that condensed milk, when diluted with seven to nine parts of water, scarcely differs from mother's milk. It might be further added, that condensed milk is even superior to cow's milk, from its "uniformity." Being made from the combined milk of a large number of cows, practically it never varies in its quality and uniformity. Hence it has an additional value as a food for infants, for it is well known to physicians, that the change from one cow's milk to another, even though both are excellent, frequently disarranges the digestion of infants and young children.

Another process of preserving milk has been adopted by Dr. Hooker, and is distinguished from that above described in the fact that the milk is preserved in open, and not in closed vessels. A specimen of his production was exhibited among the "Food Products," at the International Exhibition of 1873, at South Kensington, after the close of which it passed into the hands of the Society of Arts, in whose custody it has been ever since. It was found to be perfectly good at the end of the year 1874, and, in September of 1875, a portion of it was taken, and, with water added, was churned into butter, after which experiment no further test of its goodness was needed. The process by which the milk is preserved is kept a secret by Dr. Hooker, as it is not patented, but it is stated that nothing but sugar is added to it. Whether Dr. Hooker's preserved milk can or will be offered to the public in competition with the ordinary condensed milk we are not in a position to state; but the more sound condensed milk we can have the better.

Speaking of the condensation or concentration of milk reminds us that it has recently been discovered that a similar process is applicable to all kinds of beer and stout, and that before long we shall probably have preserved malt-liquor both for home consumption and foreign export. The idea suggested itself not long ago to Mr. P. E. Lockwood, who has been connected with both the English and Swiss condensed milk companies. With the assistance of a first-rate analytical chemist, who has for a long time given his attention to the chemistry of brewing, Mr. Lockwood has perfected the process, and protected it by patents in this and several foreign countries. The process is a very simple

one, though the result is a very interesting one, and likely to effect a great change in the export beer trade. Beer or stout is taken at any point of fermentation, though the process is better applied when it is fit for drinking, and evaporated like the milk in a vacuum pan, until a large portion of the water and alcohol is distilled away, and the beer or stout is reduced to a thick viscous fluid of about the consistency of treacle or condensed milk. The alcohol and water pass off in vapour, which in its turn is condensed in a receiver attached to the vacuum pan, and the alcohol is obtained by redistilling the liquid taken from the receiver; or a rectifying still may be attached to the vacuum pan, and the whole process be performed at one operation. This alcohol may be remixed with the condensed beer either before it is enclosed in tins or other receptacles, or at any time afterwards. By this process of condensation the beer or stout is reduced to one-eighth or one-twelfth of its original bulk, according to its original strength, and as the fermentation is suspended by the heat employed the condensed mixture may be depended on for keeping good in any climate, and for any length of time. The process of remaking the beer, *i.e.*, the reconversion of the mixture into beer, is also a simple one, consisting in mere adding the bulk of the water originally abstracted, and setting up the fermentation again by the use of a small quantity of yeast or some other ferment. Within about forty-eight hours the beer may be drawn from the tap for use, or bottled in the ordinary way, or, without using any ferment, it may be bottled and charged with carbonic acid gas by means of any aërating machine, as is done with aërated waters. As in the process of condensation the alcohol is separated from the beer, there is no actual necessity for using this again in the remaking, and therefore the omission of it would give a teetotaller's beer. It should here be mentioned that Mr. Lockwood's process is an entirely different one from those employed in making beer from solid or condensed wort, protected by several patents. Wort in any form is merely the extract of malt and hops before they have been converted into beer by fermentation, whereas the condensed beer is the beer itself as produced by fermentation at the brewery, minus the water abstracted. In making beer from solid wort a fermentation has to be engendered, a long period is required in order to obtain the proper flavour and amount of spirit, and in hot climates the whole process is liable to break down, and the liquid to turn bad; and even when the process is completed successfully the beer is but a new beer; whereas in Mr. Lockwood's process only forty-eight hours are required to remake what is actually old beer, and there is little danger of any mishap occurring under any climateric influence. But apart from the interest attaching to this new process in a chemical point of view, and as a novel method of dealing with a valuable article of food, the subject is of considerable importance in reference to the export trade in beer. The annual value of beer exported is about two and a half millions sterling, and the cost of bottling, casks, and

freightage, must be something enormous, the barrel casks alone costing from 25 to 30 shillings each, and being almost worthless in India and other countries to which beer is exported. The condensed beer, representing the product of a barrel, will be reduced to about nine-tenths of its original bulk, and the tin in which it will be hermetically sealed will cost at the most eighteen pence, so that at least three-fourths of the freightage expenses will be saved. The expenses of condensation and remaking will be a mere trifle compared with the saving in the matters just mentioned, and thus so far from Mr. Lockwood's process interfering with the brewery trade, it will probably give a fresh impetus to it. But the chief advantage of the process consists in its adaptation to any kind of beer, and consequently a lighter and cheaper article will be capable of exportation to tropical and sub-tropical countries, and being remade there, the quality of the added water making but little difference as long as the beer was originally brewed with water suitable for the purpose. At present only strong alcoholic, and consequently expensive beers can bear exportation to hot climates, but a lighter and cheaper beer remade abroad, and sold on tap, would be a great boon both to our own countrymen and beer-drinking natives. In this direction there really seems hardly any limit to the quantity which might be exported after being subjected to the condensing process. As to bottling remade beer in India, the new process would seem likely to be very extensively adopted, as there are already in India enough empty beer bottles to build the pyramids of Egypt twice over, and they are even cheaper than old bottles in England. The excellent results of Mr. Lockwood's process have been testified to by many eminent analytical chemists, among whom may be mentioned Messrs. E. R. Southby, Dugald Campbell, and Professor Wanklyn; and the practical application of the experiment will be watched with interest in several quarters.

In the foregoing remarks on Food Preservation we do not profess, as we have already said, to have treated the subject scientifically, and much less to have exhausted it. We have endeavoured rather to put the matter before our readers in a popular manner, by drawing their attention to the chief methods of preservation which have been attempted or are in actual use, and the results obtained. It will be gathered that, on the whole, these results, as far as regards meat, are not, in our opinion, satisfactory. To preserve animal food, either in a cooked or uncooked state, in such a manner that it may be presented to the consumers sightly in appearance, of natural consistency when handled, natural in its flavour, and without any loss of its nutritive value, is still a problem for scientific men to solve. If he is a benefactor to his race who makes two blades of grass to grow where only one grew before, he will be doubly so who devises a satisfactory method of meat preservation which shall enable the meat-eating and meat-desiring community of these isles to buy, at a cheap rate, the surplus animal food of other countries, so prepared that it may compete with the ordinary meat of our butchers' shops. Let us hope that such a benefactor will soon arise.

THE BRITISH NEWSPAPER PRESS IN 1875.

THERE are few histories more instructive or interesting than that of the English Newspaper Press, the present comparative free and independent condition of which is the result of a long continued and arduous struggle against the many harsh and impolitic restrictions with which successive governments, for a period of nearly a century and a half, sought to repress its growing power and influence as an exponent of hostile public opinion. Of these legislative restraints the stamp duty—which was practically a tax upon newspapers—was found the most speedy and effectual in limiting the circulation of the various journalistic publications which came within the range of its operation, and in furnishing the authorities with plausible excuses for raising difficulties, in the form of absurd and harassing regulations, with the view of preventing the successful establishment of new papers, or lessening the cost of producing those already in existence. The effects of the stamp duty as a means of repressing newspaper enterprise were shown by the results of its imposition, in 1712, in compliance with the desire of Queen Anne, who had requested the English Parliament to provide a remedy for the sale of "seditious newspapers," and thereby putting an end to the countless "factious rumours" which these publications were accused of originating for the purpose of shaking the national confidence in the Government and jeopardising the public credit. The value of the stamp duty thus imposed amounted to one halfpenny on all newspapers not exceeding half a sheet in size, and one penny on all newspapers the size of which exceeded, however slightly, half a sheet. Small as were the values of these imposts, they sufficed to accomplish the objects desired by their originators, the more popular newspapers finding their compulsory increase of price attended with a greatly diminished circulation, while those which possessed only a limited sale were crushed out of existence. In his "Journal to Stella," under date of August 7, 1712, Swift alludes to the withering influence of the newly imposed stamp duty, when he says,—"Do you know all Grub Street is dead and gone last week?" The tax proved the more vexatious to newspaper readers by reason of their having recently become familiar with the luxury of a daily journal, the first English newspaper published diurnally being the *Daily Courant*, which sprang into existence in 1709. The stamp duty failed, however, in wholly suppressing the publication of newspapers and pamphlets of a character hostile to the Government, a circumstance which gradually led to the imposition of more stringent press laws and a consequent multiplicity of newspaper prosecutions, although the alternative of increasing the amount of the stamp duty was not resorted to until 1756, when an additional halfpenny was added to the tax. This proving insufficient to check the rapidly increasing popularity of the newspaper press, the tax was suc-

cessively raised to twopence in 1789; to twopence-halfpenny in 1797; to threepence-halfpenny in 1804; and to fourpence, less a discount of twenty per cent., in 1815. Simultaneously with each increase of the newspaper tax additional regulations and penalties were imposed, and it became no easy task for a newspaper editor properly to discharge his duties without finding himself entangled amid the meshes of the law. The unreasonable character of many of the conditions to which newspaper proprietors were subject was forcibly shown by that which compelled them, no matter in what part of the country their publications were issued, to send their paper to Somerset House, in order that each sheet might be impressed with a large red stamp before it could be printed and sold as a newspaper. Not to mention the heavy expense of forwarding the paper to Somerset House, and fetching it after it had undergone the official process, much inconvenience and loss were frequently occasioned by the supply of stamped paper running short, or being delayed in its transmission from the Stamp Office to the place of publication. In addition to this, the raw material, the very paper itself, was burthened with a duty, which rendered its free and cheap manufacture an impossibility. Even the advertisements inserted in the newspapers were, with a few exceptions, subjected to a tax which pressed heavily on those who were compelled to have recourse to this mode of giving publicity to their requirements.

With the increasing spread of popular education and the growing appetite for intellectual food, the public feeling against the continued imposition of these "taxes on knowledge," as they were appropriately designated, became more demonstrative, and at last, in 1836, the stamp duty was reduced from fourpence to one penny. This was followed by an immediate increase in the number of newspaper publications, and a corresponding decrease in the number of unstamped newspapers, official statistics showing, during the first year of the lessened tax, the establishment of 61 new papers and the issue of 8,000,000 additional stamps, the number and circulation of the unstamped papers exhibiting a proportionate decrease. The duty on advertisements had previously been reduced from 3*s.* 6*d.* to 1*s.* 6*d.* in Great Britain and 1*s.* in Ireland, the result being a large increase in their number, especially in England and Wales, where they rose from 783,557 in 1832, the year preceding the reduction of the duty, to 1,315,580 in 1838. Until the reduction of the advertisement duty the lowest price of an advertisement in a London paper was 7*s.*; after the duty had become lowered it was 5*s.* The *Times* was the principal gainer by these fiscal changes, both the number of its advertisements and the extent of its circulation becoming considerably enlarged, until at one time it enjoyed a more extensive sale than the whole of its metropolitan contemporaries placed together. But the concessions made by the Government to the advocates of a cheap and free newspaper press had only the effect of stimulating further demands. The latter declared they would be content with nothing short of the abolition of the

newspaper stamp and of the advertisement and paper duties. It was also pointed out that these imposts, even in their mitigated form, seriously hindered the efforts of those engaged in promoting the diffusion of good and cheap literature, while they did not prevent the circulation of publications of the most objectionable character. In reducing the cost of the newspaper stamp to one penny, fresh conditions respecting the size of the newspapers thus taxed were imposed. No sheet of paper was allowed to have more than 1,530 square inches on one side. If it exceeded that number, but did not exceed 2,295 square inches, a three halfpenny stamp was required, a twopenny stamp being imposed where a larger number of square inches were used. Supplements, not containing more than 765 square inches of print, were charged with a duty of one halfpenny. The newspapers thus stamped enjoyed, however, one privilege,—that of free postal transmission and retransmission, which was utilised to the largest possible extent, a single copy of a stamped newspaper having been known to be forwarded and reforwarded, free of charge, through the post office at least a dozen times. The continuance of the movement for the abolition of the "taxes on knowledge" ultimately led, first, to the removal of the advertisement duty, and afterwards, in 1855, to the practical repeal of the newspaper stamp as a tax, its retention for postal purposes being made perfectly optional with newspaper proprietors. The abolition of the paper duty, which occurred a few years afterwards, completed the emancipation of the newspaper press from the numerous restrictions which had for such a lengthened term impeded its natural development and limited its sphere of usefulness.

One of the immediate results of the abolition of the newspaper stamp was the establishment of the penny daily press in the metropolis. Previous to this period the lowest-priced London daily paper was the *Daily News*, which was published at three-pence, the *Times*, *Morning Herald*, and other morning papers being issued at five-pence. The *Daily Telegraph* was the first of the London penny daily papers, having been established in June, 1855. It was succeeded in 1856 by the *Morning Star*, and in June, 1857, by the *Standard*, which was, to some extent, a cheap edition of the *Morning Herald*, a paper dating from 1781, and which was discontinued a few years ago in consequence of the remarkable success achieved by the *Standard*. At first, the penny papers each consisted of a large sheet of four pages, but on the repeal of the paper duty the size of the sheet became extended to eight pages, the *Times*, *Morning Post*, and other journals reducing their price from five-pence to three-pence. Subsequently, the *Daily News* joined the ranks of the penny-press, its circulation and influence becoming enormously increased thereby. In 1860, an attempt was made to establish a half-penny morning paper, under the name of the *Daily General Advertiser*, but the experiment proved unsuccessful. Recently a morning edition of the *Echo* has been issued with fair prospects

of success. The difficulty of establishing new daily papers in the metropolis is illustrated by the failure of the *Morning Star*, *Day*, *Iron Times*, and similar ventures, each of which was commenced under what appeared very promising auspices. The number of metropolitan daily morning papers at the present time is thirteen. Of these, five are published at three-pence, one at two-pence half-penny, one at two-pence, five at one penny, and one at a half-penny. The *Times*, notwithstanding the formidable rivalry to which it has been exposed by the increase in the number and circulation of its contemporaries, has contrived to maintain its place as the most influential journal in the United Kingdom, the liberality and enterprise which mark its conduct being unparalled in the annals of the newspaper press. It generally consists of a sheet and a half, forming twelve pages; but, during the sitting of Parliament, when the pressure on its columns becomes unusually heavy, each issue frequently consists of a double sheet, or sixteen pages. Sometimes it has been found necessary to make up a number consisting of two and a half sheets, or twenty pages, the price of the paper remaining the same. Advertisements form a conspicuous feature of the *Times*, the revenue from these being considerably in excess of that obtained by any other paper in the United Kingdom from a similar source, although no advertisement canvassers are employed, and all advertisements of an objectionable character are rigidly excluded. In fact, the censorship exercised by the *Times* over its advertising columns is of the strictest possible character, even the advertisements of professional betting-men, money-lenders, dealers in quack medicines, and the like, being refused insertion on any terms; the conduct of the *Times* in this respect forming a favourable contrast to that of the generality of newspapers published in this country. In the collection of original intelligence from all parts of the civilised world the *Times* also surpasses the whole of its contemporaries, although occasionally it has found itself closely pressed, and even outstripped, by several of the more enterprising penny papers, thanks to the energy and ability of the "special correspondents" employed by them. Each morning, the *Times* publishes nearly a page of original telegraphic intelligence from the leading cities of Europe, and from various parts of Asia and America. The cost of obtaining this news is enormous, but it enables the *Times* to sustain its *prestige* as the leading paper in Europe, if not in the world; consequently, the expense cannot be said to be thrown away.

The *Daily Telegraph*, like the *Times*, derives a considerable income from its advertisements, which are frequently so numerous as to necessitate the issue of two and four-page supplements, although it is now sought to obviate the inconvenience thereby occasioned by occasionally enlarging the size of the sheet of which the paper consists, a plan adopted also by the *Daily News* and other journals. The greater portion of the advertisements in the *Daily Telegraph* refer to situations vacant or required, houses to be let, sales by auction, and so forth. The *Daily Chronicle*,

originally a half-penny daily paper, contains probably more advertisements of this class, but relating principally to the requirements of the labouring population, than the whole of the other London daily papers, its charges for inserting the same being extremely low. This has led to the observation that the advertisement columns of the *Daily Chronicle* form a complete microcosm of metropolitan industrial life. One result of the now almost general practice of advertising vacant or desired situations has been the disappearance of many of the domestic servants' and other labour registry offices formerly so common in the metropolis. It has also tended to diminish much of the difficulty and loss of time experienced by those in search of employment, an economic gain of considerable importance. The other papers have each a goodly array of advertisements; in fact, it is to these that every newspaper, whether in town or country, looks principally for the means of defraying its expenses and bringing a profit to its proprietors. Hence the advertising department of a newspaper is frequently regarded as the most important. More than this, not a few papers, including several of large circulation, find themselves compelled to word their notices in accordance with the views of those who advertise most largely in their columns, a circumstance which often renders their reviews of new books or inventions, or of new companies, untrustworthy. But this evil is beginning to work its own cure, the more respectable papers rarely condescending to "puff" anything really unworthy of favourable notice.

Next to the advertisements, the letters of "special correspondents" form a characteristic feature of the daily press, the cheaper papers successfully vieing in this respect with their higher-priced contemporaries, albeit there is too often noticeable a tendency to sacrifice accuracy to "sensationalism." During the Crimean War, the *Times* was represented by Dr. W. H. Russell, whose letters, describing the progress and incidents of the campaign, are masterpieces of vivid description and general truthfulness of information. During the Franco-German war nearly all the leading metropolitan journals, and many of their provincial contemporaries, had representatives accompanying one or other of the contending armies, to which circumstance we owe the possession of fuller and more comprehensive details of that great and momentous struggle than of any other, however important, recorded in history. The suppression of the Indian Mutiny, the Abyssinian Campaign, the Cotton Famine in Lancashire, the visit of the Prince of Wales to the United States, the conflict for Italian Independence, and nearly all the leading historical incidents of the last twenty years, have, in this manner, been amply described by competent eye-witnesses of the various scenes delineated. At the present moment a large batch of "specials" are closely following on the footsteps of the Heir Apparent during his progress through the principal cities of India, busily recording with their pens the chief features of the scenes in which the Prince plays such a conspicuous part, that

the English people may become acquainted with the manner in which their future monarch has been received in this distant but most important portion of the British dominions. The sending of Mr. George Smith, of the British Museum, at the cost of the proprietors of the *Daily Telegraph*, to Nineveh, for the purpose of recommencing the work of Assyrian exploration; and the subsequent despatch of Mr. Stanley, at the joint expense of the same paper and a leading American journal, to continue the work of African exploration, so successfully prosecuted by the energetic Livingstone, furnish remarkable examples of metropolitan newspaper enterprise in another and somewhat new direction.

The weak point of the metropolitan daily press is the tendency, observable also in the majority of the weekly papers intended for general readers, to sacrifice accurate information, sound reasoning, and conscientious purpose to mere showiness of style: masses of words which neither convince those who hold an opposite opinion, nor enlighten those seeking for information. This is partly the result of the haste with which leading articles and special essays have frequently to be prepared, but it is also partly occasioned by the lack of properly experienced writers, it being the fashion with many journalists to imagine that they can dispense with the close study and diligent application which form the groundwork upon which all truly successful editors and newspaper writers have based their reputation.

In the class daily papers, such as the *Financier*, *Public Ledger*, and *Lloyd's List*, the principal requisite is accuracy of information, and although the columns of these journals, crowded with quotations of market prices, values of securities, returns of imports and exports, arrivals and sailings of vessels, may appear of little interest to the general reader, they are of paramount importance to those occupied with monetary and commercial matters. The *Financier*, as its name imports, is devoted principally to stock exchange and financial intelligence, a small portion of its space being reserved for editorial comments upon current financial and commercial topics. It was established in 1870, and appears to have efficiently supplied a recognised want. It is a sheet of sixteen pages, and is sold at twopence. The *Public Ledger*, which dates from 1759, is simply a list of market prices of commercial commodities together with other information of a kindred character indispensable to those engaged in mercantile pursuits. *Lloyd's List*, a yet older publication, dating from 1726, is a record of shipping departures and arrivals, and similar intelligence from all parts of the world, no trouble or expense being spared to secure perfect accuracy of information.

The London evening newspapers are five in number, one, the *Shipping and Mercantile Gazette*, established a short time previously to the reduction of the stamp duty in 1836, and issued at fivepence, being simply a full and comprehensive record of all procurable shipping and mercantile intelligence of the day. The other four mentioned, the *Pall Mall Gazette*, *Evening Standard*, *Globe*, and *Echo* are general newspapers. In addition to a

digest of the principal leading articles and items of intelligence in the morning papers, and all important telegrams and news received up to the hour of publication, these journals contain numerous short leading articles, written in a smart and lively manner, upon current topics. As a rule, an evening paper seems more difficult of successful establishment than is the case with a morning paper, a result probably of the comparatively limited and fluctuating circulation and paucity of advertisements with which evening journals have generally to contend. The *Pall Mall Gazette*, dissatisfied with its position as an evening paper, some few years ago made its appearance as a morning issue, but the experiment proved so discouraging that it was speedily abandoned, and the evening publication was resumed. It is published at twopence, and consists of from twelve to sixteen pages of well-printed matter, the circulation being confined principally to the educated classes. The *Globe* is a sheet of eight pages, about half the size of the *Evening Standard*, the latter being, to a considerable extent, an evening edition of the morning *Standard*, its large size, however, enabling it to give more copious details of the day's news than any of its contemporaries. Both the *Globe* and *Evening Standard* are penny papers, the former dating from 1803, and the latter from 1827, being thus thirty years older than the morning edition. The success of the *Globe* and *Evening Standard* dates from the time when they lowered their price and became part and parcel of the cheap press. But mere cheapness does not of itself suffice to secure the permanent establishment of an evening paper, the last few years having witnessed the decease of the *Evening Sun*, now transformed into a weekly journal; the *Express*, an evening edition of the *Daily News; Evening Star; Glowworm;* and similar issues, all of which belonged to the list of penny papers. The *Echo*, established as a halfpenny evening paper in December, 1868, encountered for a considerable period the systematic opposition of the regular newsvendors, who refused to supply it to their customers, lest they should prefer it to the penny papers. At first it consisted of a sheet of four pages, but it was afterwards enlarged to eight pages, very nearly the size of the *Globe*. Its circulation has been greatly assisted by the facilities originally afforded by its proprietors to the boys and others hawking for sale in the streets, whereby the hostility of the newsvendors was, to some extent, effectually counteracted. The difficulties attending the establishment of the *Echo* appear to have prevented any serious attempt to rival it, consequently it enjoys the distinction of being the only halfpenny evening paper in the English metropolis, although it was preceded by a halfpenny *Evening Mercury*, which collapsed after a few days' issue.

There are several papers, such as the *Investors' Guardian*, *Sporting Life*, *Prince's Price Current*, and the *County Chronicle*, published twice a week; the *Mail*, a reprint of articles and news from the *Times*, and the *Record*, a religious paper, being issued three times a week, and the *Sporting Life* four times a week.

The weekly, fortnightly, and monthly newspapers published in London number nearly three hundred and are extremely diversified in character. They may be broadly grouped as follows:—General, Local, Class, Professional, Industrial and Commercial, Financial, and Miscellaneous. Among the first we find the *Weekly Dispatch*, *Lloyd's Weekly Newspaper*, the *Weekly Times*, and other journals published at a penny and possessing an enormous circulation among the labouring and small shopkeeping classes, the sale of *Lloyd's Weekly Newspaper* alone being said to exceed half a million copies. Previous to the reduction of the stamp duty the *Weekly Dispatch*, which was established in 1801, stood at the head of the weekly press, the *Sunday Times*, which was started in 1822, at one time following closely in its wake; but when the newspaper stamp was abolished, the *Weekly Dispatch* neglected to lower its price, thereby allowing itself to be outstripped by its younger and more vigorous rivals. Ultimately it endeavoured, without success, to regain its lost circulation by reducing its price, first to twopence and afterwards to one penny; but during the last few months it has, in the hands of a new proprietary, gained a fresh lease of popularity, partly by reason of the new spirit and ability with which it is conducted. *Lloyd's Weekly News* originally appeared in 1842, as an unstamped illustrated newspaper, but under the editorship of the late Douglas Jerrold, after the repeal of the stamp duty, it at once assumed the lead of the cheap popular weekly papers. The number of general newspapers published weekly is about a dozen. Of these, seven are sold at one penny, three at twopence, one at threepence (the *English Churchman*), one at fourpence, and one at fivepence, the circulation of the two latter, the *Observer* and *John Bull*, being comparatively limited. Of the twopenny papers, one, *Public Opinion*, somewhat resembles a description of publication in vogue during the *régime* of dear news and literature, consisting as it does almost exclusively of extracts from the daily and weekly journals. Most of the weekly general newspapers print Sunday editions, containing the latest Saturday evening intelligence, the *Observer* being issued on Sunday morning only. As a rule the penny weekly papers are compiled principally from the contents of the daily journals, a sufficient quantity of original matter being added for the purpose of preserving the individuality of each.

There are, also, several illustrated publications, which may be classed among general newspapers. Of these, the two principal are the *Illustrated London News*, established in 1842, and the *Graphic*, which was started in 1869. Both of these journals possess a world-wide reputation for artistic talent and literary ability, and have contributed not a little to the improvement of the art-tastes of the community. The *Pictorial World*, commenced in 1874, is an effort to publish an illustrated paper at a lower price than the two preceding journals, while the *Penny Illustrated Paper*, established in 1851, supplies a cheap pictorial newspaper for those whose means are limited. The *Illustrated*

Sporting and Dramatic News, published at sixpence, is one of the few of its class to which the reproach of coarseness or vulgarity cannot be applied, and is valuable as indicating the present improved tone of public taste, its contents containing nothing offensive, even to the most fastidious mind. The same, unfortunately, cannot be said of the *Penny Illustrated Police News* and the *Illustrated London Clipper*, two papers which have attained a large circulation by pandering to the morbid feelings of the multitude. The front page of each is covered with coarsely drawn and engraved representations of murders, suicides, and other tragical occurrences, the literary contents consisting almost exclusively of reports of police cases, murder trials, and horrible events of every description. The popularity acquired by these two prints affords a conclusive proof that the work of national education remains far from being completed.

The Local press is one of the direct results of the repeal of the stamp and paper duties. Previous to that period, the existence of a metropolitan local paper was made impossible, by reason of the limited circulation and profits rendering compliance with the costly regulations imposed by the stamp office wholly out of the question. Directly the newspaper tax was abolished, a number of local papers sprang up in various parts of the metropolis and its neighbourhood, their publication, at a cheap rate, being in several instances due to the use of partly printed sheets, whereby a considerable saving was effected in the cost of composition. Among those who took an active part in thus lessening the expense of local newspaper production was the late Mr. Charles Knight, who published a *Town and Country Newspaper* bearing his name, which, with the addition of a cover of four or more pages, filled with local intelligence and advertisements, formed a cheap and readable family journal. Mr. Knight's experiment was not long lived, but it prepared the way for a more extended application of the principle by others, a very large number of local papers, chiefly in the provinces, consisting of partly printed sheets from metropolitan establishments. Several of the local journals, started with Mr. Knight's assistance, have since achieved a considerable amount of popularity and success. At present, there are three or four London firms who supply sheets, filled with general news, on one, two, or three pages, according to the requirements of the local publisher. The price of these sheets is very low, in consequence of the same news being used in several localities. As a local paper finds its circulation and advertisements increase, it begins to discard outside assistance and, in due time, makes its appearance as a purely local journal. Still, however, it is not above using columns, and even half columns, of stereotyped news-matter, supplied at a low rate, from the establishments in which the partly printed sheets are prepared. In fact, a local newspaper proprietor is enabled, by the use of partly printed papers and stereotyped news-matter, to regulate the cost of his paper by its actual returns.

One of the first local newspapers established in the metropolis

cessively raised to twopence in 1789; to twopence-halfpenny in 1797; to threepence-halfpenny in 1804; and to fourpence, less a discount of twenty per cent., in 1815. Simultaneously with each increase of the newspaper tax additional regulations and penalties were imposed, and it became no easy task for a newspaper editor properly to discharge his duties without finding himself entangled amid the meshes of the law. The unreasonable character of many of the conditions to which newspaper proprietors were subject was forcibly shown by that which compelled them, no matter in what part of the country their publications were issued, to send their paper to Somerset House, in order that each sheet might be impressed with a large red stamp before it could be printed and sold as a newspaper. Not to mention the heavy expense of forwarding the paper to Somerset House, and fetching it after it had undergone the official process, much inconvenience and loss were frequently occasioned by the supply of stamped paper running short, or being delayed in its transmission from the Stamp Office to the place of publication. In addition to this, the raw material, the very paper itself, was burthened with a duty, which rendered its free and cheap manufacture an impossibility. Even the advertisements inserted in the newspapers were, with a few exceptions, subjected to a tax which pressed heavily on those who were compelled to have recourse to this mode of giving publicity to their requirements.

With the increasing spread of popular education and the growing appetite for intellectual food, the public feeling against the continued imposition of these "taxes on knowledge," as they were appropriately designated, became more demonstrative, and at last, in 1836, the stamp duty was reduced from fourpence to one penny. This was followed by an immediate increase in the number of newspaper publications, and a corresponding decrease in the number of unstamped newspapers, official statistics showing, during the first year of the lessened tax, the establishment of 61 new papers and the issue of 8,000,000 additional stamps, the number and circulation of the unstamped papers exhibiting a proportionate decrease. The duty on advertisements had previously been reduced from 3*s.* 6*d.* to 1*s.* 6*d.* in Great Britain and 1*s.* in Ireland, the result being a large increase in their number, especially in England and Wales, where they rose from 783,557 in 1832, the year preceding the reduction of the duty, to 1,315,580 in 1838. Until the reduction of the advertisement duty the lowest price of an advertisement in a London paper was 7*s.*; after the duty had become lowered it was 5*s.* The *Times* was the principal gainer by these fiscal changes, both the number of its advertisements and the extent of its circulation becoming considerably enlarged, until at one time it enjoyed a more extensive sale than the whole of its metropolitan contemporaries placed together. But the concessions made by the Government to the advocates of a cheap and free newspaper press had only the effect of stimulating further demands. The latter declared they would be content with nothing short of the abolition of the

newspaper stamp and of the advertisement and paper duties. It was also pointed out that these imposts, even in their mitigated form, seriously hindered the efforts of those engaged in promoting the diffusion of good and cheap literature, while they did not prevent the circulation of publications of the most objectionable character. In reducing the cost of the newspaper stamp to one penny, fresh conditions respecting the size of the newspapers thus taxed were imposed. No sheet of paper was allowed to have more than 1,530 square inches on one side. If it exceeded that number, but did not exceed 2,295 square inches, a three halfpenny stamp was required, a twopenny stamp being imposed where a larger number of square inches were used. Supplements, not containing more than 765 square inches of print, were charged with a duty of one halfpenny. The newspapers thus stamped enjoyed, however, one privilege,—that of free postal transmission and retransmission, which was utilised to the largest possible extent, a single copy of a stamped newspaper having been known to be forwarded and reforwarded, free of charge, through the post office at least a dozen times. The continuance of the movement for the abolition of the "taxes on knowledge" ultimately led, first, to the removal of the advertisement duty, and afterwards, in 1855, to the practical repeal of the newspaper stamp as a tax, its retention for postal purposes being made perfectly optional with newspaper proprietors. The abolition of the paper duty, which occurred a few years afterwards, completed the emancipation of the newspaper press from the numerous restrictions which had for such a lengthened term impeded its natural development and limited its sphere of usefulness.

One of the immediate results of the abolition of the newspaper stamp was the establishment of the penny daily press in the metropolis. Previous to this period the lowest-priced London daily paper was the *Daily News*, which was published at three-pence, the *Times*, *Morning Herald*, and other morning papers being issued at five-pence. The *Daily Telegraph* was the first of the London penny daily papers, having been established in June, 1855. It was succeeded in 1856 by the *Morning Star*, and in June, 1857, by the *Standard*, which was, to some extent, a cheap edition of the *Morning Herald*, a paper dating from 1781, and which was discontinued a few years ago in consequence of the remarkable success achieved by the *Standard*. At first, the penny papers each consisted of a large sheet of four pages, but on the repeal of the paper duty the size of the sheet became extended to eight pages, the *Times*, *Morning Post*, and other journals reducing their price from five-pence to three-pence. Subsequently, the *Daily News* joined the ranks of the penny-press, its circulation and influence becoming enormously increased thereby. In 1860, an attempt was made to establish a half-penny morning paper, under the name of the *Daily General Advertiser*, but the experiment proved unsuccessful. Recently a morning edition of the *Echo* has been issued with fair prospects

of success. The difficulty of establishing new daily papers in the metropolis is illustrated by the failure of the *Morning Star*, *Day*, *Iron Times*, and similar ventures, each of which was commenced under what appeared very promising auspices. The number of metropolitan daily morning papers at the present time is thirteen. Of these, five are published at three-pence, one at two-pence half-penny, one at two-pence, five at one penny, and one at a half-penny. The *Times*, notwithstanding the formidable rivalry to which it has been exposed by the increase in the number and circulation of its contemporaries, has contrived to maintain its place as the most influential journal in the United Kingdom, the liberality and enterprise which mark its conduct being unparalled in the annals of the newspaper press. It generally consists of a sheet and a half, forming twelve pages; but, during the sitting of Parliament, when the pressure on its columns becomes unusually heavy, each issue frequently consists of a double sheet, or sixteen pages. Sometimes it has been found necessary to make up a number consisting of two and a half sheets, or twenty pages, the price of the paper remaining the same. Advertisements form a conspicuous feature of the *Times*, the revenue from these being considerably in excess of that obtained by any other paper in the United Kingdom from a similar source, although no advertisement canvassers are employed, and all advertisements of an objectionable character are rigidly excluded. In fact, the censorship exercised by the *Times* over its advertising columns is of the strictest possible character, even the advertisements of professional betting-men, money-lenders, dealers in quack medicines, and the like, being refused insertion on any terms; the conduct of the *Times* in this respect forming a favourable contrast to that of the generality of newspapers published in this country. In the collection of original intelligence from all parts of the civilised world the *Times* also surpasses the whole of its contemporaries, although occasionally it has found itself closely pressed, and even outstripped, by several of the more enterprising penny papers, thanks to the energy and ability of the "special correspondents" employed by them. Each morning, the *Times* publishes nearly a page of original telegraphic intelligence from the leading cities of Europe, and from various parts of Asia and America. The cost of obtaining this news is enormous, but it enables the *Times* to sustain its *prestige* as the leading paper in Europe, if not in the world; consequently, the expense cannot be said to be thrown away.

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There are, also, several illustrated publications, which may be classed among general newspapers. Of these, the two principal are the *Illustrated London News*, established in 1842, and the *Graphic*, which was started in 1869. Both of these journals possess a world-wide reputation for artistic talent and literary ability, and have contributed not a little to the improvement of the art-tastes of the community. The *Pictorial World*, commenced in 1874, is an effort to publish an illustrated paper at a lower price than the two preceding journals, while the *Penny Illustrated Paper*, established in 1851, supplies a cheap pictorial newspaper for those whose means are limited. The *Illustrated*

Sporting and Dramatic News, published at sixpence, is one of the few of its class to which the reproach of coarseness or vulgarity cannot be applied, and is valuable as indicating the present improved tone of public taste, its contents containing nothing offensive, even to the most fastidious mind. The same, unfortunately, cannot be said of the *Penny Illustrated Police News* and the *Illustrated London Clipper*, two papers which have attained a large circulation by pandering to the morbid feelings of the multitude. The front page of each is covered with coarsely drawn and engraved representations of murders, suicides, and other tragical occurrences, the literary contents consisting almost exclusively of reports of police cases, murder trials, and horrible events of every description. The popularity acquired by these two prints affords a conclusive proof that the work of national education remains far from being completed.

The Local press is one of the direct results of the repeal of the stamp and paper duties. Previous to that period, the existence of a metropolitan local paper was made impossible, by reason of the limited circulation and profits rendering compliance with the costly regulations imposed by the stamp office wholly out of the question. Directly the newspaper tax was abolished, a number of local papers sprang up in various parts of the metropolis and its neighbourhood, their publication, at a cheap rate, being in several instances due to the use of partly printed sheets, whereby a considerable saving was effected in the cost of composition. Among those who took an active part in thus lessening the expense of local newspaper production was the late Mr. Charles Knight, who published a *Town and Country Newspaper* bearing his name, which, with the addition of a cover of four or more pages, filled with local intelligence and advertisements, formed a cheap and readable family journal. Mr. Knight's experiment was not long lived, but it prepared the way for a more extended application of the principle by others, a very large number of local papers, chiefly in the provinces, consisting of partly printed sheets from metropolitan establishments. Several of the local journals, started with Mr. Knight's assistance, have since achieved a considerable amount of popularity and success. At present, there are three or four London firms who supply sheets, filled with general news, on one, two, or three pages, according to the requirements of the local publisher. The price of these sheets is very low, in consequence of the same news being used in several localities. As a local paper finds its circulation and advertisements increase, it begins to discard outside assistance and, in due time, makes its appearance as a purely local journal. Still, however, it is not above using columns, and even half columns, of stereotyped news-matter, supplied at a low rate, from the establishments in which the partly printed sheets are prepared. In fact, a local newspaper proprietor is enabled, by the use of partly printed papers and stereotyped news-matter, to regulate the cost of his paper by its actual returns.

One of the first local newspapers established in the metropolis

was the *Clerkenwell News*, a halfpenny sheet of four pages. It speedily attained great popularity, and thus subsequently led to its being issued daily and afterwards doubling its size and price and adopting the title of the *Daily Chronicle*. The local papers published in London and its suburbs are about sixty in number. Of these, the *Daily Chronicle* is published every morning, the *Hackney Gazette* and *Islington Gazette* twice a week, and the remainder once a week, generally on Friday or Saturday. The prices range from twopence, in the case of the *South London Press*, a sheet of sixteen pages, containing a large amount of original local news and literary matter, to a half-penny, represented by the *Bethnal Green Times*, a sheet of four pages. Most of the penny local papers, the *East London Observer*, for instance, consist of a sheet of eight pages. At least one-third of the printed matter in each paper consists of advertisements, principally of a local character, this being found a cheaper and more efficacious means of obtaining publicity than the old system of hand-bill distribution. In some instances, the greater portion of the paper is filled with advertisements, chiefly of situations vacant or required and houses and apartments to be let, the supply of local news being regarded apparently as a minor consideration. The local news usually consists of brief reports of parochial meetings, district festive gatherings, and the like, with from half a column to a column of editorial comments. Many local papers find the systematic reporting of sermons and religious discourses, by various popular local preachers, a sure method of increasing their circulation, and, not many months ago, it was ascertained that, out of thirty-eight metropolitan local papers, no less than twenty-nine had from one to two columns thus occupied. Serial tales are scarcely known in these journals, although they have become indispensable features in many provincial local papers, nor is too much attention bestowed upon theatricals, races, and other pastimes of a similar character. It may be said, with much justice, that the majority of metropolitan local papers are "severely respectable." Perhaps the *City Press* furnishes the most perfect example of a local paper. In addition to ample reports of all leading events occurring in the City of London, biographical notices of City worthies, and reviews of books bearing upon City matters, it has published a large number of highly interesting articles, descriptive of the ancient history, topography, antiquities, social life, and present condition of the wide and busy district of which it is no unworthy representative, for there is scarcely a City topic which does not find a place in its columns.

The Class papers are exceedingly numerous, and include a variety of religious journals, almost every denomination of any importance having its special organ. Among the principal church papers are the *English Churchman* (the oldest), *Guardian*, and *Church Review;* the dissenting bodies being represented by the *Nonconformist*, *Baptist*, *Primitive Methodist*, *Watchman*, *Christian World*, *English Independent*, *Methodist Reader*, and similar

publications, the united circulation of which amounts to many thousands, the lion's share falling to the *Christian World*, a penny sheet of sixteen pages, of which about one-third or more occupied with advertisements. The Roman Catholics have several journals, including the *Tablet*, *Westminster Gazette*, *Universe*, and *Catholic Opinion*. Our Jewish brethren are represented by the *Jewish Chronicle* and the *Jewish Record;* the believers in spiritualism rejoicing in the possession of the *Spiritualist*, and other papers of a similar character. The *Court Circular*, *Court Journal*, and *Drawing Room Gazette* are, as indicated by their names, devoted principally to the affairs of the fashionable world, while the *Queen*, the sole survivor of a host of kindred publications, busies itself with the requirements and interests of the fair sex. There are four or five journals supported almost exclusively by Americans resident in this country, the principal feature in each being a list of Transatlantic visitors arriving in or leaving England. The Freemasons have two papers, the *Freemason* and the *Freemasons' Chronicle;* the *London Mirror* representing the philanthopic world ; and the *Temperance Record*, *Temperance Star*, *Alliance News*, *Templar*, with other newspapers of the same character, forming the mouthpieces of the various sections of the temperance community. The shape, appearance, and price of the various publications above indicated are as diverse and difficult of enumeration as are the interests which they profess to advocate.

The Professional papers are not over numerous, but, as a rule, they are edited with great care, the various articles displaying much ability and knowledge on the part of the writers. Among these publications we have the *Architect*, *Builder*, and *British Architect*, three journals which have done and are still doing much to create in the public mind a purer architectural taste, thereby rendering less frequent those sad architectural mistakes which have, on former occasions, awakened the ridicule of our continental neighbours. The naval and military professions are represented by the *Navy, Army and Navy Gazette*, *Broad Arrow*, and the *United Service Gazette;* the Volunteers having the *Volunteer Service Gazette*. The Civil Service, a numerous and influential section of the community, have their interests carefully watched over by the *Civilian* and the *Civil Service Gazette;* the *Lancet*, *Medical Press*, *Medical Times*, *Medical Record*, *British Medical Journal*, and similar papers performing a like duty for the members of the medical profession. Among the more important professional papers not above alluded to are the *Justice of the Peace*, *Law Journal*, *Law Times*, the *Choir*, *Musical Standard*, *Concordia*, *Musical World*, *Schoolmaster*, and *Era*, the latter being a large sheet of sixteen pages, devoted exclusively to recording everything of interest transpiring in the theatrical world, and having several pages filled with curious advertisements of actors and actresses requiring engagements, managers forming companies, theatres to be let, and so forth, the whole forming a distinct species of literature

of the most unique description. Although having a limited circulation only, its high price, fivepence, and the large number of its advertisements, cause the *Era* to yield a handsome annual revenue to its proprietor.

The Industrial and Commercial papers are both numerous and important; most of the great manufacturing industries, as well as the leading branches of commerce, being most adequately represented. With these journals, lowness of price constitutes the exception, it being found difficult to produce a paper of sufficiently high character under fourpence or sixpence, especially when the large size and practical nature of the contents of most of these publications are considered. It is a suggestive fact that, with very few exceptions, the whole of this class of weekly papers has sprung into existence since the abolition of the "taxes on knowledge." The building trades were among the first to possess a journal devoted to their interests; the *Builder*, already mentioned, being started as a stamped newspaper in 1842, and the *Building News* following in 1854. On the removal of the stamp duty, these two publications lowered their price to fourpence, at the same time greatly improving the character of their contents, thereby being enabled to successfully withstand the competition of the *Builders' Weekly Reporter*, and other trade papers subsequently established at a lower rate. There are several journals representing the iron trades, the principal being *Iron*, *Iron Trade Exchange*, and the *Iron and Coal Trades Review*. Closely allied with these, but more scientific in character, are the *Engineer*, *Engineering*, and *English Mechanic*, which, although dealing chiefly with engineering and mechanical subjects, have become indispensable to the skilled ironworker. The coal trades are represented by the *Colliery Guardian*, *Mining Journal*, *Mining World*, and other publications of a similar description. Many of the other leading trades and manufacturing industries have their organs in such publications as the *Journal of Gas Lighting*, *Warehouseman and Drapers' Trade Journal*, *Bakers' Record*, *Pawnbrokers' Gazette*, *Grocer*, *Gardeners' Chronicle*, *Gardeners' Magazine*, *Garden*, *Furniture Gazette*, *Draper*, *Licensed Victuallers' Guardian*, *Licensed Victuallers' Gazette*, and the *Tailor and Cutter*. There are also numerous monthly and bi-monthly publications of the same class, such as the *Bookseller*, *Publishers' Circular*, *Press News*, *Printers' Register*, *Stationer*, *Leather Trades' Circular*, *Timber Trade Journal*, *Wine Trade Review*, *Brewers' Guardian*, *Brewers' Journal*, *Chemist and Druggist*, *Drapers' and Milliners' Gazette*. *Hairdressers' Chronicle*, *Ironmonger*, *Milliner, and Dressmaker*, *Saddlers' Harness Makers' and Carriage Builders' Gazette*, *Sewing Machine Gazette*, *Tanners' and Leathersellers' Journal*, *Telegraphic Journal*, *Textile Manufacturer*, *Mineral Water Trade Review*, and *Tobacco Trade Review*. The amount of technical information contained in the majority of these publications is not only large, but, in many instances, of a most valuable nature, thereby materially assisting in promoting the development and success of the

various trades represented. So long as the stamp duty remained in existence, the issue of these trade papers was virtually prohibited, a circumstance which goes far to explain the deficiency of technical knowledge observable among a considerable portion of the skilled artisan class, and which, at one time, appeared to seriously endanger the maintenance of our industrial supremacy. In discouraging the issue of trade journals, by insisting that every paper containing news of any description should be liable to the stamp duty, and the various restrictions accompanying the same, the Government in former periods did much to hinder the improvement and extension of our native trades and industries, thereby affording an opportunity of which our continental rivals were not slow in availing themselves. The great utility of these papers is shown in the active support received by them from the classes for whose benefit they were established, not a few of the principal journals proving a lucrative source of profit to their respective proprietors. In one respect they differ considerably from ordinary newspapers ; the sheets on which they are printed being divided into a larger number of small sized pages, thereby facilitating the preservation of the various issues for purposes of reference or binding into volumes.

The foregoing remarks are also applicable in some measure to the journals professing to represent the multifarious interests of the commercial community. With the exception of the *Economist* and *London Commercial Record*, both founded in 1842, the *Commercial Gazette*, established in 1853, and two or three other papers, the whole of the commercial press dates from a period subsequent to the repeal of the stamp duty. The distinguishing features of these papers are accuracy and comprehensiveness of information connected with commercial matters, practical comments on events of interest to the commercial world, and careful analyses of all Parliamentary papers dealing with commercial affairs. To a general reader, the columns of a commercial journal present few features of interest, but the apparently dull and monotonous lists of market quotations, values of imports and exports, cargoes arriving from foreign countries, and so forth, are of essential importance to those engaged in commercial and mercantile pursuits. Indeed, the care and labour required to ensure the accuracy of the intelligence given, is often of a most excessive character, every entry having to be duly verified and corrected. Much of the information is derived from "Commercial Lists," supplied to subscribers only. Of these latter, a considerable number are issued both daily and weekly, thereby facilitating commercial operations. The various shipping and railway journals may be regarded as forming part of the commercial press. Among the former, are *Mitchell's Maritime Register*, established in 1856, and the *Mercantile Shipping Register*, a kind of weekly *Lloyd's List*, established in 1871. The journals treating of railway affairs are : the *Railway Journal*, the oldest of the class, and formerly known as *Herepath's*

Journal; Railway News, Railway Record, and *Railway Times*, the *Railway Service Gazette*, a penny publication, started at the beginning of 1872, forming the organ of a large and influential section of the railway *employés*. The monthly commercial papers include the *British Trade Journal*, *Chambers of Commerce Chronicle*, *Commercial World*, and the *Journal of Industry*.

Among the numerous publications which make Financial matters their speciality, we have the *Money Market Review*, *Bullionist*, and *Monetary Gazette*. These devote their columns principally to Stock Exchange and Money Market intelligence, although much of the news thus given is anticipated in the "money articles," which form an indispensable feature of the daily morning and evening papers. The *Bondholders' Register* belongs to the same category as the preceding; but the *Investors' Guardian*, *Joint Stock Companies Journal*, and *Reporter*, while devoting a portion of their space to monetary matters, concentrate their attention on the affairs of public companies, reporting their proceedings, criticising their prospects, and describing their character aud operations. In like manner, the *Insurance Record*, *Insurance Gazette*, *Insurance Guardian* (these two latter being monthly publications), *Review*, and *Post Magazine*, deal with the business of insurance companies, furnishing every information required by share and policy holders in the same. It cannot, however, be said with perfect truth, that the tone of the financial press is always perfectly disinterested, or free from venal influences, the temptation to publish attractive descriptions of the prospects of unsound or bubble companies in return for permission to insert highly remunerative advertisements, frequently being found irresistible in the case of papers possessing a limited and profitless circulation. The prices of the various financial journals range from sixpence to one penny; the higher prices being the rule. Several of them possess a comparatively large circulation, but there are few in which the advertisements do not constitute the principal source of revenue.

There are several papers devoted to the supply of Agricultural intelligence, the most largely circulated and influential having been established many years previous to the repeal of the stamp duty, until which period they possessed almost a monopoly of circulation in the agricultural districts, where they are now scarcely to be met with in consequence of the greater popularity enjoyed by the numerous local prints which have been successfully established since 1855—a fact which also explains the rarity of attempts to establish new agricultural journals in the metropolis, there being only one, the *Chamber of Agriculture Journal and Farmers' Chronicle*, of a date subsequent to the abolition of the newspaper tax. The oldest member of the agricultural press is the *County Chronicle and Mark Lane Journal*, founded in 1787; the next being *Bell's Weekly Messenger*, dating from 1796, and consisting of a large sheet of eight pages, which is sold at fivepence. The *Mark Lane Express*, established in 1832; the *Magnet*, established in 1837; and the *Farmer*,

established in 1843, constitute the remaining principal agricultural papers. They supply much valuable information respecting the state of the crops and the ruling prices of agricultural produce, together with notices of everything of interest to the agriculturist, especially the proceedings of agricultural associations and events occurring in connection with the annual shows held by them. The large amount of prosperity enjoyed by the agricultural and landed interests during the last twenty years has led to the establishment of a class of journals intended principally for the use of country gentlemen, and in which considerable prominence is given to field sports and rural pursuits generally. Of these the principal is the *Field*, a large-sized and ably-conducted paper, dating from the beginning of 1853, and published at sixpence. *Land and Water*, another sheet of the same description, bestows considerable attention upon facts connected with natural history, and treats the various forms of country sport in a more scientific manner than any of its contemporaries. The partiality evinced by many individuals, especially young persons, for pet birds and animals, has led to the publication of a few papers, such as the *Fancier* and *Fanciers' Gazette*, in which every information is afforded respecting the proper modes of rearing the different kinds of live stock, particularly dogs, pigeons, and poultry, most in favour with fanciers, and of the numerous exhibitions of the same annually held in various parts of the United Kingdom.

The Sporting papers, that is those which are occupied principally with racing affairs, pedestrian, pigeon shooting, swimming, and other matches, and athletic sports generally, are tolerably numerous, several, such as the *Sportsman* and *Sporting Life*, enjoying an enormous circulation, especially in the English northern counties, where the love of racing and athletic pastimes is extremely keen ; but the financial prosperity of the bulk of these publications has lately received a severe check, in consequence of the prohibition by the new Betting Act of the insertion of advertisements relating to betting matters. These advertisements formerly constituted a source of considerable profit in consequence of their number and the high scale of charges demanded for their insertion. Various expedients have been ineffectually resorted to with the view of evading the operation of the law, but the heavy fines inflicted upon two or three proprietors of sporting journals, who were convicted of infringing the provisions of the Act, are not calculated to encourage the repetition of these attempts. The nearest approach to the former announcements of professional betting men are short advertisements, in which only the names and addresses of the individuals advertising are given, but even the insertion of these is dangerous, especially if the names published are those of well-known betters. The addresses given are mostly situated in France, Boulogne being the favourite *locale* of the betting fraternity ; but certain recent prosecutions and convictions of English betting men in Paris are likely to result in driving these sporting Ishmaels

farther a field. The principal sporting paper is *Bell's Life*, which is both the oldest, having been established in 1820, and the best conducted of this class of journals. It was in the columns of this paper that the talents of the late John Leech, whose pencil did so much to secure the permanent popularity of *Punch*, first became known to the public by a series of exquisitely humorous sketches of Parisian life and character. The high reputation of *Bell's Life* as an authority in sporting matters, combined with the known impartiality and integrity of its editors, has frequently led to its decisions in sporting disputes being accepted as final. It is published twice a-week, the price being sixpence. The *Sporting Life* and *Sporting Opinion* have both been started within the last twenty years, and are eagerly consulted by those interested in such matters, especially during the few days preceding a popular equine contest, such as the Derby or the St. Leger. At these times the number of copies sold of the cheaper papers, such as the *Sporting Life*, which is sold at a penny, is extremely large. Many of the writers on these papers supply articles also for the daily journals, in which they attempt to predict the probable winners of races, and although their prophecies are seldom realised, the popular belief in their infallibility generally remains unshaken. It is creditable to the proprietors of the sporting papers that, with the exception of betting advertisements, they seldom permit announcements of an objectionable character to appear in their columns, notwithstanding the numerous inducements to adopt an opposite course.

Among the Miscellaneous newspapers we find the *Athenæum* and the *Academy* representing literature, art, and science, the advertising columns of the former being celebrated for announcements of new publications and of journalistic posts vacant or desired. The *Athenæum* was established in 1828, and although it has had many rivals, the two most formidable being the *Literary Gazette* and the *Critic*, it has outlived them all, and is now enjoying, in an enlarged form at a reduced price, a career of prosperity almost without parallel in the history of purely critical journalism. The *Academy* is more scientific in tone, but, despite the ability with which it is conducted, it appears to have failed to gain the favour of the literary world to the same extent as its contemporary. Humorous and satirical literature is represented by *Punch*, *Fun*, *Judy*, the *Hornet*, *London Figaro*, *Vanity Fair*, and the *World*. Of the first-named it is needless to speak; it is probably one of the best known publications in every country where the English language is spoken. *Vanity Fair*, which is published at one shilling, is remarkable chiefly for its chromo-lithographs of political and other celebrities, which are among the best of recent times. They are from the pencil of Signor Pellegrini, an Italian artist. The *World* is an attempt to revive the personal element in satirical literature, and although its articles frequently display much vigour and pungency, they are not always to the taste of the public, with whom the love of direct personalities appears to be dying out. The

Photographic Journal, *British Journal of Photography*, and the *Photographic News* efficiently represent a branch of scientific industry which is continually receiving fresh developments, and has already revolutionised more than one department of manufacturing activity and enterprise. Following close upon these we have the *Chemical News*, *Scientific Review*, *Nature*, and other publications in which the scientific element preponderates. Then come a batch of papers, such as the *European Mail*, *Allen's Indian Mail*, *Home News*, *Canadian News*, *African Times*, *Brazil and River Plate Mail*, *Colonies*, *New Zealand Examiner*, and the *Pacific Mail*, intended for the use of English residents in various parts of India, the Colonies, and other parts of the world. Indian and Colonial news for home readers is supplied by the *Australian Gazette*, *Homeward Mail*, and *Overland Mail*. Foreign matters are treated also in the *Cosmopolitan*, *Foreign Times*, *London and China Express*, and *London and China Telegraph*. Among the papers printed in foreign languages are the *Courrier de l'Europe* (French), *Gaceta Officiel Americana* (Spanish American), and the *Londoner Zeitung* (German).

The *Accountant*, *Educational Times*, *School-Board Chronicle*, *Justice of the Peace*, *Local Government Chronicle*, *Metropolitan*, *Poor Law Gazette*, and *County Courts Chronicle*, represent various phases of official life; while the labouring classes have, as their mouth-pieces, the *Beehive*, *People's Advocate*, *Labour News*, and other papers of a similar character. The *Saturday Review*, *Spectator*, and *Examiner*, are types of the few journals in which literary, political, and social topics are treated in a somewhat careful and scholarly manner, though the tendency to be smart at the expense of impartiality is frequently visible, especially in the *Saturday Review*. In this latter journal, however, the articles seem to have lost much of the acidity which at one time caused them to be largely relished. Among the remaining papers not above enumerated are *Notes and Queries*, an almost unique publication, *Capital and Labour*, *National Food Reformer*, *Newsvendor*, *Public Health*, *Sanitary Record*, and many others, for the names of which no space is allowed us. Altogether the number of newspapers, daily, weekly, and monthly, published in London at the present time approaches three hundred and fifty. Ten years ago the number was about three hundred. In 1815, the number did not exceed sixty. Of these, fifteen were daily publications. When the stamp-duty was repealed, it was predicted that the country would become inundated, from one end to the other, with newspaper publications of the lowest and most objectionable character. How far that prognostication was based on truth the present condition and character of the metropolitan daily and weekly press is sufficient to show. For general impartiality of tone, conscientiousness of opinion, accuracy of information, and real literary ability, the London newspapers, as a whole, have no rival in the civilised world, not even in the United States, where every village and township possesses its own news sheet.

It is, however, in the provinces that the effects of the removal of "the taxes on knowledge" have become most apparent. Previous to 1855, the provincial newspapers were comparatively few in number and high in price, especially in the rural districts, where a newspaper rarely found its way into the labourer's cottage. In 1815, the number of papers in England and Wales, exclusive of London, was 122; in Scotland, 26; and in Ireland, 49. In 1863, the number of provincial papers in England and Wales exceeded 600; in Scotland, they amounted to 142; and in Ireland, to 134. At present the number of English and Welsh provincial papers is over 1,300, the number in Scotland being 149, and in Ireland 137. The increase in the number of the English provincial papers is most marked in the agricultural districts, where the purchase of the local paper seems to have become habitual in most labouring-class families. Of the agricultural counties, Kent possesses the largest number of local newspaper publications, these amounting to 65, Devonshire coming next with 39 papers. Of the manufacturing counties, Yorkshire and Lancashire have by far the most considerable proportion of newspaper publications, the former having 122, and the latter 104 local journals. The smallest number of local newspapers is to be found in Huntingdonshire which possesses only two journals, the *Hunts Guardian* and the *St. Neot's Chronicle*, but there are several counties, such as Rutland, which have no papers at all. The largest number of papers published in any English provincial town is at Liverpool, which possesses 18 local publications, Manchester coming next with 10, and Brighton following with 9. Of the 1,305 provincial papers in England and Wales, 57 are daily morning papers, 26 are daily evening papers, the remainder being weekly publications. The largest number of daily morning and evening papers is at Liverpool, which possesses 6 morning and 1 evening publication, Manchester and Birmingham following each with five papers. Nearly all the daily papers are published in leading commercial or manufacturing cities and towns, the exceptions being Windsor, Exeter, and Brighton.

Taking the agricultural counties in alphabetical order, we find Bedfordshire in possession of eight papers, three of which are published in Bedford, three at Luton, one at Dunstable, and one at Leighton Buzzard. Berks possesses eleven papers, of which three are issued at Windsor, three at Reading, the remainder making their appearance at Abingdon, Faringdon, Maidenhead, Newbury, and Wallingford. Buckinghamshire possesses nine papers, of which 2 belong to Buckingham, 2 to Aylesbury, 2 to Newport Pagnel, 2 to Stoney Stratford, and 1 to High Wycombe. Cambridge has nine newspapers, 4 being published in the county town, 4 at Wisbech, and 1 at March. Cumberland possesses fourteen newspaper publications. Of these, 4 are issued at Whitehaven, 3 at Penrith, 3 at Carlisle, and the remainder at Cockermouth, Maryport, Wigton, and Workington. Devonshire possesses forty papers. Of these, 7 are published at Exeter, 3 at Plymouth, 6 at Barnstaple, 2 each, Dartmouth,

Dawlish, Exmouth, Teignmouth, Tiverton, Torquay, and Newton Abbot; and 1 each at Bideford, Chudleigh, Ilfracombe, Kingsbridge, Newton, Sidmouth, Tavistock, Toines, Devonport, and South Molton. Dorsetshire has fifteen papers; Essex, 23; Hampshire, 20; Herefordshire, 8; Hertfordshire, 9; Isle of Wight, 11; Kent, 65; Lincolnshire, 21; Norfolk, 17; Oxfordshire, 17; Shropshire, 12; Somersetshire, 30; Suffolk, 16; Surrey, 23; Sussex, 36; Westmorland, 4; and Wiltshire, 17. Turning to the semi-agricultural, semi-manufacturing counties, we find that Derbyshire has 24 papers; Gloucestershire, 32; Leicestershire, 13; Northamptonshire, 8; Nottinghamshire, 9; Worcestershire, 16; and Warwickshire, 32; of which 17 are issued in the manufacturing towns of those counties. In the manufacturing counties, we find Yorkshire with 132 papers; Lancashire, with 105; and Staffordshire, with 31. In the mining counties, Cornwall has 16 papers; Durham, 15; and Northumberland, 15. Of the Welsh counties, Brecknock has 1 paper; Carmarthen, 7; Carnarvon, 6; Cardigan, 5; Denbigh, 5; Flint, 5; Glamorgan, 16; Merioneth, 3; Monmouth, 15; Montgomery, 13; Pembroke, 7; and Radnor, 1. The oldest papers are to be found at Bath, Birmingham, Bristol, Cambridge, Canterbury, Gloucester, Hereford, Leeds, Leicester, Newcastle, Northampton, Nottingham, Oxford, Reading, and Salisbury, each of which possesses newspaper publications dating from the middle or commencement of the last century, while at Worcester, *Berrow's Journal* can boast of having been founded in 1690, the *Stamford Mercury* claiming to be the next oldest English provincial newspaper, having been established in 1695. Age has not impaired the prestige of the latter, its circulation being extremely large.

The characteristics of the English provincial journals vary according to the districts in which they are published. The size of the sheet also differs considerably, but the general price is one penny. Tales, copious extracts from the magazines, and reprinted articles form conspicuous features of the weekly papers, and in several instances, such as that of the *Preston Guardian*, literary supplements are issued free of charge. The smaller papers find the cost of production considerably lessened, as in the metropolitan local journals, by the use of partly printed sheets and stereotyped columns of news-matter. They are also supplied at a comparatively low rate with telegraphic reports of news from all parts of the United Kingdom by means of an institution known as the "Central News" having its head quarters Agency," in the metropolis. The "Central Press," "Press and "Press Associations," are organisations of a character similar to the "Central News." They furnish provincial editors not only with reports of news, but also with leading articles, London letters, reviews, and other literary matter in accordance with a fixed scale of charges. Many of the leading provincial daily papers have established branch offices in London, whence late news and advertisements and news are forwarded by telegraph to the head offices. A common practice with those having

the control of the London offices, was to obtain early copies of the "Times" and other London morning papers, and to telegraph an abstract of the principal contents to their respective papers. These abstracts were immediately set up and published in second editions of the local prints, the consequence being that the *Times* and other metropolitan journals found their news anticipated and their circulation considerably decreased in the districts supplied with the pilfered intelligence. The result of this was the establishment of what are known as the newspaper trains on the principal lines of railway running out of London, the idea being suggested by the manner in which the proprietors of the *Scotsman* arranged, by means of a special train, for the almost simultaneous publication of their paper in Edinburgh and Glasgow. The experiment was first made by the proprietors of the *Times* during the earlier part of the present year (1875), when they ran a special fast train, at an early hour of the morning, between London and Birmingham, thereby enabling copies of their journal to be placed on the breakfast tables of the residents in the capital of the hardware manufacturing districts. The advantages of this system, so far as the London press was concerned, became so apparent that it was not long before the influence of the leading metropolitan papers induced the Midland, London and North Western, Great Northern, and other leading railway companies, to furnish facilities for the more speedy delivery of copies in the principal provincial cities and towns. The newspaper trains leave the various metropolitan termini shortly after five, A.M., performing their respective journeys in an almost incredibly short space of time, the stoppages being few in number and the rate of speed extremely high. To each train are attached two or three vans, in which Messrs. W. H. Smith and Sons, whose arrangements for the provincial sale of metropolitan publications are on a scale of unparalleled magnitude, cause their *employés* to sort the various batches of newspapers and make them up into parcels during the journey, thereby effecting a still greater saving of time, the vans being specially fitted up for the purpose. Previously the parcels were made up in London, but considering the smallness of the period intervening between the hour at which the various morning papers are published and that at which the newspaper trains are dispatched, the continuance of that system became difficult, if not impossible. The morning newspapers are now printed at a much earlier hour. This has necessitated the omission of all parliamentary proceedings after a certain specified period, a circumstance which is gradually effecting the reform a late member of the House of Commons, Mr. Joseph Brotherton, vainly sought to accomplish, namely the prevention of the undue extension of debates to unreasonable hours in the morning. As a rule, all the metropolitan daily papers are now obtainable before 8 A.M., in the principal towns within a radius of one hundred miles from London.

These arrangements have not affected the higher class of pro-

vincial daily journals, such as the *Manchester Guardian* and the *Leeds Mercury*, which have become indispensable in the extensive districts through which they circulate, but the change has been severely felt by the publications which sought to lessen their expenses by the adoption of a system of wholesale stealing from their London contemporaries. Few of the provincial dailies are sold at a higher price than one penny; while in numerous instances the charge is only a halfpenny. The total number of provincial daily publications, both morning and evening, in England and Wales, is about 100. Of these, Liverpool possesses 7; Birmingham, Manchester, and Newcastle, 5 each; Bradford, 4; Leeds, 4; Sheffield, Bolton, Brighton, Bristol, Exeter, Hull, Leicester, and Nottingham, 3 each; Huddersfield, Middesborough, Plymouth, Shields, Sunderland, Wolverhampton, and Cardiff, 2 each; while Barnstaple, Barrow, Bury, Cheltenham, Darlington. Dewsbury, Hanley, Ipswich, Newport, Norwich, Oldham, Windsor and York are content with one each. Most of these papers consist each of a sheet of four pages which is enlarged when necessary to one of eight pages. Several publish weekly editions which enjoy an extensive cirulation, as in the case of the *Manchester Weekly Examiner* and the *Newcastle Weekly Chronicle*. They generally consist of a sheet of eight pages, the *Manchester Weekly Examiner*, which sells at twopence, giving a supplement, of purely literary matter, printed on a smaller sheet of eight pages. The energy and ability with which the majority of these newspapers are conducted is most remarkable. In not a few instances they have successfully competed with their metropolitan contemporaries in procuring original news both home and foreign. Several possess independent means of electric communication with their London offices, thereby enabling them to receive the latest parliamentary and other metropolitan intelligence up to the moment of going to press. Local affairs are usually reported in the fullest and most comprehensive manner, which leaves nothing to be desired, contrasting, in this respect, most favourably with the meagre amount of local information doled out in former years. A special feature in most provincial journals, both daily and weekly, is the letter from its London correspondent, in which every kind of metropolitan rumour and gossip is dished up for the edification of country readers. Sometimes, however, these communications are made a means of giving publicity to intelligence which otherwise might not find its way into print. They seem to be relics of the old London News-letters, which at one period formed almost the only means possessed by those residing in distant parts of the kingdom for obtaining metropolitan intelligence. The number of advertisements inserted in such papers as the *Manchester Guardian*, *Leeds Mercury*, *Newcastle Daily Chronicle*, and other daily papers published in the manufacturing and mining districts is very large, sometimes occupying considerably more than one-half of each issue. These advertisements are principally of a local character, and illustrate

the nature of the leading productive and other industries of the various places in which each paper is sold.

The provincial weekly and bi-weekly papers are conducted with much of the spirit and readiness of enterprise, characteristic of their daily contemporaries, especially in the manufacturing districts, where such journals as the *Warrington Guardian* possess a large and remunerative circulation. The number of cities and towns in England and Wales possessing more than one local weekly paper is about 255. The leading features of the different weekly papers vary according to the character of the districts in which they make their appearance. Considerable prominence is given to local intelligence, of every description, and, in numerous instances, to papers relating to local antiquarian and topographical matters, whereby a large amount of valuable information has been obtained respecting the history and characteristics of many places concerning which there previously existed merely a few scanty records. A considerable portion of space is often devoted to extracts from new books and magazines, the labour of selecting the latter being much lessened by the common practice among metropolitan publishers of forwarding printed sheets of extracts from the works sold by them, to the editors of provincial journals. The most common size of these weekly papers is that of a large sheet of eight pages, the oldest established journals generally charging twopence, and their younger rivals one penny per copy. There are a few weekly papers sold at a halfpenny, but the general character and contents of these are of an inferior description. There are numerous class papers published in the provinces. Among these latter are the *Alliance News*, *Cope's Tobacco Plant*, *Co-operative News*, *English Hop Journal*, *Iron Trade Circular*, *Manchester Sporting Chronicle*, *Commercial Travellers' Review*, *Dorset Abstainer*, *Leeds Business Circular*, *Midland and Northern Coal and Iron Trades Gazette*, *Unitarian Herald*, and the *Typographical Societies' Circular*. There are also various local publications of a satirical or humourous character, such as the Manchester *Free Lance* and the Birmingham *Town Crier*.

Scotland possesses 14 daily and 135 weekly papers. Of the dailies, three morning and two evening papers are published in Glasgow; two morning and two evening papers in Edinburgh; two morning papers in Dundee; and one each in Aberdeen and Leith. Of the weekly and bi-weekly papers, Glasgow possesses 13; Edinburgh 6, exclusive of the *Edinburgh Gazette*, an official publication of the same character as the *London Gazette;* Aberdeen, Alloa, Ayr, Dumfries, Dunfermline, Elgin, Cupar, Kirkcaldy, Stranraer, Greenock, Hawick, Inverness, Kelso, Leith, Montrose, Kirkwall, Paisley, Perth, and Stirling possessing from two to four each. The leading features of the Scottish provincial press, making due allowance for differences of local characteristics, strongly resemble those which distinguish the English provincial press, but the intellectual tone is considerably higher, a result, in some degree, of the superior educational facilities so

long enjoyed by the Scottish people. The *Scotsman*, the leading Scottish daily paper, possesses a reputation and influence greater than any other paper published outside the English metropolis, and is conducted with wonderful energy and ability. The Glasgow daily papers will compare also most favourably with those issued elsewhere, no pains or expense being spared in obtaining the earliest intelligence of importance from all parts of the kingdom. Nearly all the leading Scottish papers, both daily and weekly, have offices in London, with special wires, by means of which they are enabled to receive almost instantaneous reports of important events.

In Ireland there are 19 daily morning and evening papers. Of these, 8—five morning and three evening—are published in Belfast ; the same number, in the same proportions, in Dublin ; 3 in Cork ; and 1 in Waterford. There are 17 weekly papers issued in Dublin, including the *Irish Builder*, *Irish Law Times*, *Irish Sportsman*, and other class journals. The Irish capital also possesses an official *Gazette*, like those published by the Government authorities in London and Edinburgh. The oldest of the Dublin papers are the *Evening Post*, established in 1725, and Saunders' *News-letter*, which dates from 1746, both being daily publications. The oldest Belfast journal is the *Belfast News-letter*, which was founded in 1773. The number of Irish weekly papers is 118. Of these, 7 are published in Waterford, 4 each in Wexford and Limerick, 3 each in Londonderry, Enniskillen, Monaghan, Nenagh, Dundalk, and Sligo ; and 2 each in Tuam, Tralee, Newry, Maryborough, Ennis, Galway, Kilkenny, Lurgan, Longford, Cavan, Clonmel, Drogheda, Armagh, Castlebar, Carlow, and Boyle. The general size of the Irish papers is smaller than that of the English and Scottish papers published at the same prices, a result of the lesser circulation and number of advertisements upon which their prosperity so materially depends. To the same cause, also, must be attributed the paucity of local intelligence and marked absence of enterprise which characterise many of the smaller weekly sheets ; but it is only fair to state that, during the last few years, a considerable improvement has been perceptible in these respects. Several of the Irish papers are conducted more as party organs than as news journals, the language employed often being of the most violent and inflammatory description. The general tone of the Irish press, as a whole, is, however of a loyal and peaceable character.

The number of papers published in the British Isles is 18, of which Jersey possesses 8, Guernsey 6, and the Isle of Man 4. Of these, the Jersey *British Press* and the Guernsey *Daily Herald* are published every morning, most of the others make their appearance at frequent intervals during the week.

The greater number of the newspapers issued in the United Kingdom, even in the most remote districts, are printed by the aid of steam-power, the improvements in the construction of printing machinery enabling even the largest sheets to be pro-

Journal; Railway News, Railway Record, and *Railway Times*, the *Railway Service Gazette*, a penny publication, started at the beginning of 1872, forming the organ of a large and influential section of the railway *employés*. The monthly commercial papers include the *British Trade Journal, Chambers of Commerce Chronicle, Commercial World*, and the *Journal of Industry*.

Among the numerous publications which make Financial matters their speciality, we have the *Money Market Review, Bullionist*, and *Monetary Gazette*. These devote their columns principally to Stock Exchange and Money Market intelligence, although much of the news thus given is anticipated in the "money articles," which form an indispensable feature of the daily morning and evening papers. The *Bondholders' Register* belongs to the same category as the preceding; but the *Investors' Guardian, Joint Stock Companies Journal*, and *Reporter*, while devoting a portion of their space to monetary matters, concentrate their attention on the affairs of public companies, reporting their proceedings, criticising their prospects, and describing their character and operations. In like manner, the *Insurance Record, Insurance Gazette, Insurance Guardian* (these two latter being monthly publications), *Review*, and *Post Magazine*, deal with the business of insurance companies, furnishing every information required by share and policy holders in the same. It cannot, however, be said with perfect truth, that the tone of the financial press is always perfectly disinterested, or free from venal influences, the temptation to publish attractive descriptions of the prospects of unsound or bubble companies in return for permission to insert highly remunerative advertisements, frequently being found irresistible in the case of papers possessing a limited and profitless circulation. The prices of the various financial journals range from sixpence to one penny; the higher prices being the rule. Several of them possess a comparatively large circulation, but there are few in which the advertisements do not constitute the principal source of revenue.

There are several papers devoted to the supply of Agricultural intelligence, the most largely circulated and influential having been established many years previous to the repeal of the stamp duty, until which period they possessed almost a monopoly of circulation in the agricultural districts, where they are now scarcely to be met with in consequence of the greater popularity enjoyed by the numerous local prints which have been successfully established since 1855—a fact which also explains the rarity of attempts to establish new agricultural journals in the metropolis, there being only one, the *Chamber of Agriculture Journal and Farmers' Chronicle*, of a date subsequent to the abolition of the newspaper tax. The oldest member of the agricultural press is the *County Chronicle and Mark Lane Journal*, founded in 1787; the next being *Bell's Weekly Messenger*, dating from 1796, and consisting of a large sheet of eight pages, which is sold at fivepence. The *Mark Lane Express*, established in 1832; the *Magnet*, established in 1837; and the *Farmer*,

established in 1843, constitute the remaining principal agricultural papers. They supply much valuable information respecting the state of the crops and the ruling prices of agricultural produce, together with notices of everything of interest to the agriculturist, especially the proceedings of agricultural associations and events occurring in connection with the annual shows held by them. The large amount of prosperity enjoyed by the agricultural and landed interests during the last twenty years has led to the establishment of a class of journals intended principally for the use of country gentlemen, and in which considerable prominence is given to field sports and rural pursuits generally. Of these the principal is the *Field*, a large-sized and ably-conducted paper, dating from the beginning of 1853, and published at sixpence. *Land and Water*, another sheet of the same description, bestows considerable attention upon facts connected with natural history, and treats the various forms of country sport in a more scientific manner than any of its contemporaries. The partiality evinced by many individuals, especially young persons, for pet birds and animals, has led to the publication of a few papers, such as the *Fancier* and *Fanciers' Gazette*, in which every information is afforded respecting the proper modes of rearing the different kinds of live stock, particularly dogs, pigeons, and poultry, most in favour with fanciers, and of the numerous exhibitions of the same annually held in various parts of the United Kingdom.

The Sporting papers, that is those which are occupied principally with racing affairs, pedestrian, pigeon shooting, swimming, and other matches, and athletic sports generally, are tolerably numerous, several, such as the *Sportsman* and *Sporting Life*, enjoying an enormous circulation, especially in the English northern counties, where the love of racing and athletic pastimes is extremely keen ; but the financial prosperity of the bulk of these publications has lately received a severe check, in consequence of the prohibition by the new Betting Act of the insertion of advertisements relating to betting matters. These advertisements formerly constituted a source of considerable profit in consequence of their number and the high scale of charges demanded for their insertion. Various expedients have been ineffectually resorted to with the view of evading the operation of the law, but the heavy fines inflicted upon two or three proprietors of sporting journals, who were convicted of infringing the provisions of the Act, are not calculated to encourage the repetition of these attempts. The nearest approach to the former announcements of professional betting men are short advertisements, in which only the names and addresses of the individuals advertising are given, but even the insertion of these is dangerous, especially if the names published are those of well-known betters. The addresses given are mostly situated in France, Boulogne being the favourite *locale* of the betting fraternity ; but certain recent prosecutions and convictions of English betting men in Paris are likely to result in driving these sporting Ishmaels

farther a field. The principal sporting paper is *Bell's Life*, which is both the oldest, having been established in 1820, and the best conducted of this class of journals. It was in the columns of this paper that the talents of the late John Leech, whose pencil did so much to secure the permanent popularity of *Punch*, first became known to the public by a series of exquisitely humorous sketches of Parisian life and character. The high reputation of *Bell's Life* as an authority in sporting matters, combined with the known impartiality and integrity of its editors, has frequently led to its decisions in sporting disputes being accepted as final. It is published twice a-week, the price being sixpence. The *Sporting Life* and *Sporting Opinion* have both been started within the last twenty years, and are eagerly consulted by those interested in such matters, especially during the few days preceding a popular equine contest, such as the Derby or the St. Leger. At these times the number of copies sold of the cheaper papers, such as the *Sporting Life*, which is sold at a penny, is extremely large. Many of the writers on these papers supply articles also for the daily journals, in which they attempt to predict the probable winners of races, and although their prophecies are seldom realised, the popular belief in their infallibility generally remains unshaken. It is creditable to the proprietors of the sporting papers that, with the exception of betting advertisements, they seldom permit announcements of an objectionable character to appear in their columns, notwithstanding the numerous inducements to adopt an opposite course.

Among the Miscellaneous newspapers we find the *Athenæum* and the *Academy* representing literature, art, and science, the advertising columns of the former being celebrated for announcements of new publications and of journalistic posts vacant or desired. The *Athenæum* was established in 1828, and although it has had many rivals, the two most formidable being the *Literary Gazette* and the *Critic*, it has outlived them all, and is now enjoying, in an enlarged form at a reduced price, a career of prosperity almost without parallel in the history of purely critical journalism. The *Academy* is more scientific in tone, but, despite the ability with which it is conducted, it appears to have failed to gain the favour of the literary world to the same extent as its contemporary. Humorous and satirical literature is represented by *Punch*, *Fun*, *Judy*, the *Hornet*, *London Figaro*, *Vanity Fair*, and the *World*. Of the first-named it is needless to speak; it is probably one of the best known publications in every country where the English language is spoken. *Vanity Fair*, which is published at one shilling, is remarkable chiefly for its chromo-lithographs of political and other celebrities, which are among the best of recent times. They are from the pencil of Signor Pellegrini, an Italian artist. The *World* is an attempt to revive the personal element in satirical literature, and although its articles frequently display much vigour and pungency, they are not always to the taste of the public, with whom the love of direct personalities appears to be dying out. The

Photographic Journal, *British Journal of Photography*, and the *Photographic News* efficiently represent a branch of scientific industry which is continually receiving fresh developments, and has already revolutionised more than one department of manufacturing activity and enterprise. Following close upon these we have the *Chemical News*, *Scientific Review*, *Nature*, and other publications in which the scientific element preponderates. Then come a batch of papers, such as the *European Mail*, *Allen's Indian Mail*, *Home News*, *Canadian News*, *African Times*, *Brazil and River Plate Mail*, *Colonies*, *New Zealand Examiner*, and the *Pacific Mail*, intended for the use of English residents in various parts of India, the Colonies, and other parts of the world. Indian and Colonial news for home readers is supplied by the *Australian Gazette*, *Homeward Mail*, and *Overland Mail*. Foreign matters are treated also in the *Cosmopolitan*, *Foreign Times*, *London and China Express*, and *London and China Telegraph*. Among the papers printed in foreign languages are the *Courrier de l'Europe* (French), *Gaceta Officiel Americana* (Spanish American), and the *Londoner Zeitung* (German).

The *Accountant*, *Educational Times*, *School-Board Chronicle*, *Justice of the Peace*, *Local Government Chronicle*, *Metropolitan*, *Poor Law Gazette*, and *County Courts Chronicle*, represent various phases of official life; while the labouring classes have, as their mouth-pieces, the *Beehive*, *People's Advocate*, *Labour News*, and other papers of a similar character. The *Saturday Review*, *Spectator*, and *Examiner*, are types of the few journals in which literary, political, and social topics are treated in a somewhat careful and scholarly manner, though the tendency to be smart at the expense of impartiality is frequently visible, especially in the *Saturday Review*. In this latter journal, however, the articles seem to have lost much of the acidity which at one time caused them to be largely relished. Among the remaining papers not above enumerated are *Notes and Queries*, an almost unique publication, *Capital and Labour*, *National Food Reformer*, *Newsvendor*, *Public Health*, *Sanitary Record*, and many others, for the names of which no space is allowed us. Altogether the number of newspapers, daily, weekly, and monthly, published in London at the present time approaches three hundred and fifty. Ten years ago the number was about three hundred. In 1815, the number did not exceed sixty. Of these, fifteen were daily publications. When the stamp-duty was repealed, it was predicted that the country would become inundated, from one end to the other, with newspaper publications of the lowest and most objectionable character. How far that prognostication was based on truth the present condition and character of the metropolitan daily and weekly press is sufficient to show. For general impartiality of tone, conscientiousness of opinion, accuracy of information, and real literary ability, the London newspapers, as a whole, have no rival in the civilised world, not even in the United States, where every village and township possesses its own news sheet.

It is, however, in the provinces that the effects of the removal of "the taxes on knowledge" have become most apparent. Previous to 1855, the provincial newspapers were comparatively few in number and high in price, especially in the rural districts, where a newspaper rarely found its way into the labourer's cottage. In 1815, the number of papers in England and Wales, exclusive of London, was 122; in Scotland, 26; and in Ireland, 49. In 1863, the number of provincial papers in England and Wales exceeded 600; in Scotland, they amounted to 142; and in Ireland, to 134. At present the number of English and Welsh provincial papers is over 1,300, the number in Scotland being 149, and in Ireland 137. The increase in the number of the English provincial papers is most marked in the agricultural districts, where the purchase of the local paper seems to have become habitual in most labouring-class families. Of the agricultural counties, Kent possesses the largest number of local newspaper publications, these amounting to 65, Devonshire coming next with 39 papers. Of the manufacturing counties, Yorkshire and Lancashire have by far the most considerable proportion of newspaper publications, the former having 122, and the latter 104 local journals. The smallest number of local newspapers is to be found in Huntingdonshire which possesses only two journals, the *Hunts Guardian* and the *St. Neot's Chronicle*, but there are several counties, such as Rutland, which have no papers at all. The largest number of papers published in any English provincial town is at Liverpool, which possesses 18 local publications, Manchester coming next with 10, and Brighton following with 9. Of the 1,305 provincial papers in England and Wales, 57 are daily morning papers, 26 are daily evening papers, the remainder being weekly publications. The largest number of daily morning and evening papers is at Liverpool, which possesses 6 morning and 1 evening publication, Manchester and Birmingham following each with five papers. Nearly all the daily papers are published in leading commercial or manufacturing cities and towns, the exceptions being Windsor, Exeter, and Brighton.

Taking the agricultural counties in alphabetical order, we find Bedfordshire in possession of eight papers, three of which are published in Bedford, three at Luton, one at Dunstable, and one at Leighton Buzzard. Berks possesses eleven papers, of which three are issued at Windsor, three at Reading, the remainder making their appearance at Abingdon, Faringdon, Maidenhead, Newbury, and Wallingford. Buckinghamshire possesses nine papers, of which 2 belong to Buckingham, 2 to Aylesbury, 2 to Newport Pagnel, 2 to Stoney Stratford, and 1 to High Wycombe. Cambridge has nine newspapers, 4 being published in the county town, 4 at Wisbech, and 1 at March. Cumberland possesses fourteen newspaper publications. Of these, 4 are issued at Whitehaven, 3 at Penrith, 3 at Carlisle, and the remainder at Cockermouth, Maryport, Wigton, and Workington. Devonshire possesses forty papers. Of these, 7 are published at Exeter, 3 at Plymouth, 6 at Barnstaple, 2 each, Dartmouth,

Dawlish, Exmouth, Teignmouth, Tiverton, Torquay, and Newton Abbot; and 1 each at Bideford, Chudleigh, Ilfracombe, Kingsbridge, Newton, Sidmouth, Tavistock, Toines, Devonport, and South Molton. Dorsetshire has fifteen papers; Essex, 23; Hampshire, 20; Herefordshire, 8; Hertfordshire, 9; Isle of Wight, 11; Kent, 65; Lincolnshire, 21; Norfolk, 17; Oxfordshire, 17; Shropshire, 12; Somersetshire, 30; Suffolk, 16; Surrey, 23; Sussex, 36; Westmorland, 4; and Wiltshire, 17. Turning to the semi-agricultural, semi-manufacturing counties, we find that Derbyshire has 24 papers; Gloucestershire, 32; Leicestershire, 13; Northamptonshire, 8; Nottinghamshire, 9; Worcestershire, 16; and Warwickshire, 32; of which 17 are issued in the manufacturing towns of those counties. In the manufacturing counties, we find Yorkshire with 132 papers; Lancashire, with 105; and Staffordshire, with 31. In the mining counties, Cornwall has 16 papers; Durham, 15; and Northumberland, 15. Of the Welsh counties, Brecknock has 1 paper; Carmarthen, 7; Carnarvon, 6; Cardigan, 5; Denbigh, 5; Flint, 5; Glamorgan, 16; Merioneth, 3; Monmouth, 15; Montgomery, 13; Pembroke, 7; and Radnor, 1. The oldest papers are to be found at Bath, Birmingham, Bristol, Cambridge, Canterbury, Gloucester, Hereford, Leeds, Leicester, Newcastle, Northampton, Nottingham, Oxford, Reading, and Salisbury, each of which possesses newspaper publications dating from the middle or commencement of the last century, while at Worcester, *Berrow's Journal* can boast of having been founded in 1690, the *Stamford Mercury* claiming to be the next oldest English provincial newspaper, having been established in 1695. Age has not impaired the prestige of the latter, its circulation being extremely large.

The characteristics of the English provincial journals vary according to the districts in which they are published. The size of the sheet also differs considerably, but the general price is one penny. Tales, copious extracts from the magazines, and reprinted articles form conspicuous features of the weekly papers, and in several instances, such as that of the *Preston Guardian*, literary supplements are issued free of charge. The smaller papers find the cost of production considerably lessened, as in the metropolitan local journals, by the use of partly printed sheets and stereotyped columns of news-matter. They are also supplied at a comparatively low rate with telegraphic reports of news from all parts of the United Kingdom by means of an institution known as the "Central News" having its head quarters Agency," in the metropolis. The "Central Press," "Press and "Press Associations," are organisations of a character similar to the "Central News." They furnish provincial editors not only with reports of news, but also with leading articles, London letters, reviews, and other literary matter in accordance with a fixed scale of charges. Many of the leading provincial daily papers have established branch offices in London, whence late news and advertisements and news are forwarded by telegraph to the head offices. A common practice with those having

the control of the London offices, was to obtain early copies of the "Times" and other London morning papers, and to telegraph an abstract of the principal contents to their respective papers. These abstracts were immediately set up and published in second editions of the local prints, the consequence being that the *Times* and other metropolitan journals found their news anticipated and their circulation considerably decreased in the districts supplied with the pilfered intelligence. The result of this was the establishment of what are known as the newspaper trains on the principal lines of railway running out of London, the idea being suggested by the manner in which the proprietors of the *Scotsman* arranged, by means of a special train, for the almost simultaneous publication of their paper in Edinburgh and Glasgow. The experiment was first made by the proprietors of the *Times* during the earlier part of the present year (1875), when they ran a special fast train, at an early hour of the morning, between London and Birmingham, thereby enabling copies of their journal to be placed on the breakfast tables of the residents in the capital of the hardware manufacturing districts. The advantages of this system, so far as the London press was concerned, became so apparent that it was not long before the influence of the leading metropolitan papers induced the Midland, London and North Western, Great Northern, and other leading railway companies, to furnish facilities for the more speedy delivery of copies in the principal provincial cities and towns. The newspaper trains leave the various metropolitan termini shortly after five, A.M., performing their respective journeys in an almost incredibly short space of time, the stoppages being few in number and the rate of speed extremely high. To each train are attached two or three vans, in which Messrs. W. H. Smith and Sons, whose arrangements for the provincial sale of metropolitan publications are on a scale of unparalleled magnitude, cause their *employés* to sort the various batches of newspapers and make them up into parcels during the journey, thereby effecting a still greater saving of time, the vans being specially fitted up for the purpose. Previously the parcels were made up in London, but considering the smallness of the period intervening between the hour at which the various morning papers are published and that at which the newspaper trains are dispatched, the continuance of that system became difficult, if not impossible. The morning newspapers are now printed at a much earlier hour. This has necessitated the omission of all parliamentary proceedings after a certain specified period, a circumstance which is gradually effecting the reform a late member of the House of Commons, Mr. Joseph Brotherton, vainly sought to accomplish, namely the prevention of the undue extension of debates to unreasonable hours in the morning. As a rule, all the metropolitan daily papers are now obtainable before 8 A.M., in the principal towns within a radius of one hundred miles from London.

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vincial daily journals, such as the *Manchester Guardian* and the *Leeds Mercury*, which have become indispensable in the extensive districts through which they circulate, but the change has been severely felt by the publications which sought to lessen their expenses by the adoption of a system of wholesale stealing from their London contemporaries. Few of the provincial dailies are sold at a higher price than one penny; while in numerous instances the charge is only a halfpenny. The total number of provincial daily publications, both morning and evening, in England and Wales, is about 100. Of these, Liverpool possesses 7; Birmingham, Manchester, and Newcastle, 5 each; Bradford, 4; Leeds, 4; Sheffield, Bolton, Brighton, Bristol, Exeter, Hull, Leicester, and Nottingham, 3 each; Huddersfield, Middesborough, Plymouth, Shields, Sunderland, Wolverhampton, and Cardiff, 2 each; while Barnstaple, Barrow, Bury, Cheltenham, Darlington. Dewsbury, Hanley, Ipswich, Newport, Norwich, Oldham, Windsor and York are content with one each. Most of these papers consist each of a sheet of four pages which is enlarged when necessary to one of eight pages. Several publish weekly editions which enjoy an extensive cirulation, as in the case of the *Manchester Weekly Examiner* and the *Newcastle Weekly Chronicle*. They generally consist of a sheet of eight pages, the *Manchester Weekly Examiner*, which sells at twopence, giving a supplement, of purely literary matter, printed on a smaller sheet of eight pages. The energy and ability with which the majority of these newspapers are conducted is most remarkable. In not a few instances they have successfully competed with their metropolitan contemporaries in procuring original news both home and foreign. Several possess independent means of electric communication with their London offices, thereby enabling them to receive the latest parliamentary and other metropolitan intelligence up to the moment of going to press. Local affairs are usually reported in the fullest and most comprehensive manner, which leaves nothing to be desired, contrasting, in this respect, most favourably with the meagre amount of local information doled out in former years. A special feature in most provincial journals, both daily and weekly, is the letter from its London correspondent, in which every kind of metropolitan rumour and gossip is dished up for the edification of country readers. Sometimes, however, these communications are made a means of giving publicity to intelligence which otherwise might not find its way into print. They seem to be relics of the old London News-letters, which at one period formed almost the only means possessed by those residing in distant parts of the kingdom for obtaining metropolitan intelligence. The number of advertisements inserted in such papers as the *Manchester Guardian*, *Leeds Mercury*, *Newcastle Daily Chronicle*, and other daily papers published in the manufacturing and mining districts is very large, sometimes occupying considerably more than one-half of each issue. These advertisements are principally of a local character, and illustrate

the nature of the leading productive and other industries of the various places in which each paper is sold.

The provincial weekly and bi-weekly papers are conducted with much of the spirit and readiness of enterprise, characteristic of their daily contemporaries, especially in the manufacturing districts, where such journals as the *Warrington Guardian* possess a large and remunerative circulation. The number of cities and towns in England and Wales possessing more than one local weekly paper is about 255. The leading features of the different weekly papers vary according to the character of the districts in which they make their appearance. Considerable prominence is given to local intelligence, of every description, and, in numerous instances, to papers relating to local antiquarian and topographical matters, whereby a large amount of valuable information has been obtained respecting the history and characteristics of many places concerning which there previously existed merely a few scanty records. A considerable portion of space is often devoted to extracts from new books and magazines, the labour of selecting the latter being much lessened by the common practice among metropolitan publishers of forwarding printed sheets of extracts from the works sold by them, to the editors of provincial journals. The most common size of these weekly papers is that of a large sheet of eight pages, the oldest established journals generally charging twopence, and their younger rivals one penny per copy. There are a few weekly papers sold at a halfpenny, but the general character and contents of these are of an inferior description. There are numerous class papers published in the provinces. Among these latter are the *Alliance News*, *Cope's Tobacco Plant*, *Co-operative News*, *English Hop Journal*, *Iron Trade Circular*, *Manchester Sporting Chronicle*, *Commercial Travellers' Review*, *Dorset Abstainer*, *Leeds Business Circular*, *Midland and Northern Coal and Iron Trades Gazette*, *Unitarian Herald*, and the *Typographical Societies' Circular*. There are also various local publications of a satirical or humourous character, such as the Manchester *Free Lance* and the Birmingham *Town Crier*.

Scotland possesses 14 daily and 135 weekly papers. Of the dailies, three morning and two evening papers are published in Glasgow; two morning and two evening papers in Edinburgh; two morning papers in Dundee; and one each in Aberdeen and Leith. Of the weekly and bi-weekly papers, Glasgow possesses 13; Edinburgh 6, exclusive of the *Edinburgh Gazette*, an official publication of the same character as the *London Gazette;* Aberdeen, Alloa, Ayr, Dumfries, Dunfermline, Elgin, Cupar, Kirkcaldy, Stranraer, Greenock, Hawick, Inverness, Kelso, Leith, Montrose, Kirkwall, Paisley, Perth, and Stirling possessing from two to four each. The leading features of the Scottish provincial press, making due allowance for differences of local characteristics, strongly resemble those which distinguish the English provincial press, but the intellectual tone is considerably higher, a result, in some degree, of the superior educational facilities so

long enjoyed by the Scottish people. The *Scotsman*, the leading Scottish daily paper, possesses a reputation and influence greater than any other paper published outside the English metropolis, and is conducted with wonderful energy and ability. The Glasgow daily papers will compare also most favourably with those issued elsewhere, no pains or expense being spared in obtaining the earliest intelligence of importance from all parts of the kingdom. Nearly all the leading Scottish papers, both daily and weekly, have offices in London, with special wires, by means of which they are enabled to receive almost instantaneous reports of important events.

In Ireland there are 19 daily morning and evening papers. Of these, 8—five morning and three evening—are published in Belfast ; the same number, in the same proportions, in Dublin ; 3 in Cork ; and 1 in Waterford. There are 17 weekly papers issued in Dublin, including the *Irish Builder*, *Irish Law Times*, *Irish Sportsman*, and other class journals. The Irish capital also possesses an official *Gazette*, like those published by the Government authorities in London and Edinburgh. The oldest of the Dublin papers are the *Evening Post*, established in 1725, and Saunders' *News-letter*, which dates from 1746, both being daily publications. The oldest Belfast journal is the *Belfast News-letter*, which was founded in 1773. The number of Irish weekly papers is 118. Of these, 7 are published in Waterford, 4 each in Wexford and Limerick, 3 each in Londonderry, Enniskillen, Monaghan, Nenagh, Dundalk, and Sligo ; and 2 each in Tuam, Tralee, Newry, Maryborough, Ennis, Galway, Kilkenny, Lurgan, Longford, Cavan, Clonmel, Drogheda, Armagh, Castlebar, Carlow, and Boyle. The general size of the Irish papers is smaller than that of the English and Scottish papers published at the same prices, a result of the lesser circulation and number of advertisements upon which their prosperity so materially depends. To the same cause, also, must be attributed the paucity of local intelligence and marked absence of enterprise which characterise many of the smaller weekly sheets ; but it is only fair to state that, during the last few years, a considerable improvement has been perceptible in these respects. Several of the Irish papers are conducted more as party organs than as news journals, the language employed often being of the most violent and inflammatory description. The general tone of the Irish press, as a whole, is, however of a loyal and peaceable character.

The number of papers published in the British Isles is 18, of which Jersey possesses 8, Guernsey 6, and the Isle of Man 4. Of these, the Jersey *British Press* and the Guernsey *Daily Herald* are published every morning, most of the others make their appearance at frequent intervals during the week.

The greater number of the newspapers issued in the United Kingdom, even in the most remote districts, are printed by the aid of steam-power, the improvements in the construction of printing machinery enabling even the largest sheets to be pro-

duced with an amount of speed and economy of cost which were formerly deemed impossible. Very few papers of large circulation are printed from the original types, stereotype plates being used instead, thereby enabling a corresponding number of copies of a single issue to be produced at one and the same time. The rapidity and perfection of the stereotyping process is something marvellous, few readers being aware of the fact that the newspapers perused by them were printed from metal casts of the original types. The machinery used in printing the *Times*, *Standard*, *Daily Telegraph*, and other leading journals, is of the most complete and efficient character, forming as great a contrast to that which the *Times* used, on the occasion of its first introduction, in November, 1814, as that found existing between a modern locomotive and the ingenious but cumbrous machines with which steam traffic was inaugurated, half a century ago, on the Stockton and Darlington Railway. The paper used for printing is supplied in huge rolls, each many hundreds of yards in length, the operations of printing and cutting into sheets being performed almost simultaneously. In this manner several thousands of miles of paper are annually used.

The foreign intelligence, in the shape of telegraphic items, is supplied chiefly by Reuter's Telegram Company, which possesses agents and correspondents in almost every part of the civilised world. The organization owes its existence to the persevering exertions of Mr., now Baron, Reuter, who conceived the idea of utilising the existing telegraphic facilities for the cheap and speedy transmission of news for journalistic purposes. At first, he encountered much ridicule and opposition, but gradually the value of his scheme was recognised, and at last he found himself in the possession of one of the most valuable monopolies ever created without legislative assistance. Ultimately, he disposed of his rights to a company formed for the express purpose of acquiring the same, and in which he retains an interest as the holder of numerous shares. Various attempts have been made for the purpose of contesting the supremacy of Reuter's Agency as a means of furnishing foreign intelligence, but hitherto they have resulted in failure; the *Times* being almost the only British journal which finds itself comparatively independent of the assistance afforded by Reuter's Telegram Company.

JOHN PLUMMER.

ARCTIC EXPLORATION.

PROBABLY the first thought of nine persons out of ten, when the resumption of Arctic exploration was mooted at the end of 1873, might be expressed in the proverbial Latin, *Cui bono?* What is the use of Arctic Exploration? With the tragic fate of Franklin fresh in their minds, it was not easy to reconcile the public generally to a renewal of geographic search, unless something more practical than the gratification of curiosity as to the conformation of the land or water at the North Pole was likely to result from it. As a matter of fact, it is, indeed, not quite easy to satisfy such an inquiry. That knowledge will come of such an expedition as that now absent from England in these desolate extremes of the earth may be taken for certain; but it is quite another thing to show that the knowledge will necessarily be of real use to mankind. Still it must be admitted that those who have pressed with success upon the Government a renewal of the search had much to allege in support of their propositions.

In the memorandum of the Royal Geographical Society which initiated the present expedition, it is set forth, rather vaguely, it must be admitted, that no such extent of unknown area, in any part of the world, ever yet failed to yield results of practical as well as of purely scientific value: we must, in fact, rely upon the absolute truth that knowledge is power, and be content to gather knowledge, trusting to its proving powerful for good in some direction or other. This line of argument, though it looks a little weak at first, will bear consideration better than at first sight might appear. It is quite impossible, judging from the past history of science in its bearing upon practical life, to say what well ascertained fact in nature may not, at some time or other, be turned to high and great purposes. Knowledge of mere dry facts may lie unproductive for centuries; and after all, in some turn of the wheel of human progress, may develope into undreamed-of fruitfulness. The germ of power which is contained in all fact never dies. Accordingly it is not such a weak motive as it reads, to say, as the Arctic Committee of the Royal Geographical Society did, that "as it is mathematically certain that the area exists, it is impossible that its examination can fail to add largely to the sum of human knowledge."

But the estimate of result from Polar exploration which is suggested by the sentence just quoted may fairly be considered to be under the mark. The results of exploring the Arctic circle, there is every reason to expect, will be far more than proportionate to the area proposed to be explored. The Poles are points of peculiar interest in the terrestrial spheroid; they are literally centres, pivots, turning-points; and all life and matter there existing is necessarily existing under certain extreme conditions which render their observation likely to be of special value.

No one will fail to see at once the practical bearing of oceanic

exploration. Navigation is perhaps the most important operation in which mankind are engaged ; and for purposes of navigation the importance of investigating currents will be recognised at once. Without a knowledge of sea currents even the compass may be but a guide to destruction. Now sea currents are largely caused by the shifting of ice, and the consequent changes of temperature ; and nothing is more certain to throw light upon the laws of sea currents than a knowledge of the circumstances under which the great masses of ice are formed in the Polar regions. Scarcely less important for navigation are air currents, or winds ; and these, again, are so closely connected with temperature and its variations, that the Poles must be considered in a high degree implicated in any attempt to frame a theory of air currents. Thirdly, under the head of the bearings of Polar exploration upon navigation, it must be remembered that meteorology is a science of vast importance to the sailor. It is a science in which, as yet, very little real progress has been made : thousands of detailed observations of weather are daily made and chronicled ; bnt hitherto they have scarcely led to the establishment of any general principles, or reliable systematization. When we pursue the question a step further, and mention the word climate, it will be evident enough how wide and vital to the well-being and comfort of mankind are the branches of knowledge which may be advanced by an Arctic expedition. The climate of Europe, as the Royal Geographical Society remind us, depends in no small degree on the atmospheric conditions of the Polar area, in which the development of extremely low temperatures necessarily leads to corresponding extreme changes of pressure and other atmospheric disturbances, the effect of which extends far into the temperate zone. For the satisfactory appreciation of these phenomena, a precise knowledge of the distribution of land and water within the Polar area is necessary ; and any addition to our geographical knowledge of the Arctic regions, accompanied, as it will be, by suitable observations of its meteorology, cannot fail to afford improved means of understanding the meteorology of our own country, and of the earth generally.

But these obviously practical matters are not the only motives which the advocates of a renewed survey of the northern regions of the earth had to advance. Pure science, as distinguished from applied science, has, it must be owned, the most to expect from such an expedition. And here let us recall the fact, already mentioned, that accumulation of knowledge, however barren it may look, is always a sufficient reason for exertion ; and that an apparently barren fact may become fruitful at any time, and at times the most unexpected. It seems at first sight but a poor reason to give for an Arctic expedition that it may determine certain problems in electricity ; but when we add the reflection that electricity is fast becoming an agent of boundless use in daily life, the folly of despising the solution of a problem in electricity becomes apparent. Who, when this subtle fluid was first traced, and its habits dimly defined, could have foreseen the uses

it has since been put to in providing means of instantaneous communication, irrespective of distance? The discoverer of electricity disclosed the germ of what, in the end, will be almost a new sense added to the faculties of man. When therefore we are told that the extension of research into the phenomena of magnetism and atmospheric electricity in the vicinity of the Poles will necessarily be "of much scientific importance," we need not let the sensation of a sneer pass through our minds at the phrase: what is "of scientific importance" to-day may become a matter of daily comfort, almost a necessary of life, to-morrow. There can be no doubt, as the Government have been assured by the men of thought who have urged the expedition, that investigations in all branches of physics in the proximity of the Pole, where so many of the forces of nature operate in an extreme degree, either of excess or defect, will be followed by the acquisition of knowledge only possible of attainment in those exceptional localities.

Geology is one of the sciences which has much to hope from Arctic exploration. Under this head it is enough to know that coal is involved, and every one will appreciate its importance. The existence of a palæozoic coal formation has been determined, but its extent and composition are points upon which Arctic exploration may throw considerable light. This, however, is but a small question as compared with many others which the geologist hopes to have elucidated by the present exploration. It is not too much to say that the entire system of the now received geological text books may be upset in five years' time by facts which the Arctic expedition may collect. The theory of a glacier epoch, in particular, waits possible confirmation or dissipation.

The mineralogy of Greenland is of considerable importance; and the promoters of the expedition think the discovery of new veins of cryolite, a mineral already found there, and affording the means of procuring aluminium, is not improbable.

In reviewing the expectations which the other sciences cherish of the renewal of Polar search, we find especially remarkable those entertained by a class of learned men who would at first sight seem least interested, botanists. Greenland is, in respect of its flora, one of the most poverty stricken areas on the face of the globe; but it is wonderful, nevertheless, what wide problems depend upon the more complete study of Arctic botany. The vegetation of those regions, in the opinion of Dr. Hooker, throws great light upon the geographical distribution of plants on the surface of the globe. It has certainly done so in the past, whatever it may do in the future. On the return of Sir Edward Belcher's expedition from those parts a series of rocks, collected in the neighbourhood of Dino, were brought home, containing fossil leaves of plants totally unknown in that latitude at present. These were sufficient, in the hands of experts, to prove that the region was once occupied by forests of elm, pine, oak, maple, plane, &c.; and, what was more remark-

able, there were evidences of apparently evergreen trees, which would show that the region must have had perennial light. It is now considered of great importance to ascertain if similar vegetation extended towards the Pole.

It has been pointed out, under the head of the light which is likely to be thrown upon botany by the exploration of these apparently barren regions, that the flora of Greenland, although so far from luxuriant, has special points of interest. Dr. Hooker enumerates six, as follows:—1. The flowering plants are almost without exception natives of the Scandinavian peninsula. 2. There is in the Greenland flora scarcely any admixture of American types, which nevertheless *are found on the opposite coast of Labrador and the Polar islands.* 3. A considerable proportion of the common Greenland plants are nowhere found in Labrador and the Polar islands, nor inland elsewhere in the New World. 4. The parts of Greenland south of the Arctic Circle, though warmer than those north of it, and presenting a coast 400 miles in length, contain scarcely any plants not found to the north of that circle. 5. A considerable number of Scandinavian plants which are not natives of Greenland are nevertheless natives of Labrador and the Polar islands. 6. Certain Greenland and Scandinavian plants which are nowhere found in the Polar regions, Labrador, or Canada, reappear at considerable elevations on the White, the Alleghany, and other mountains of the United States.

No other portion of the world presents to naturalists such a remarkable combination of peculiar features as this; and to explain it, botanists, taking into account certain truths in geology, have educed a theory which is a remarkable example of the way in which detailed scientific facts may be gradually made, by the grasp of intellect, to assume a connected consistency. The great geological truth which is at once confirmed by this condition of the sub-Polar flora, and chiefly helps to account for it, is the existence at one time of a warmer period round the Poles and elsewhere than the present; this warm period—when it must have been a luxury to live within the Arctic circle—having been succeeded by one of intense cold, commonly known as the glacial epoch. During this pleasant warm period in the history of our earth, it is held that the Scandinavian flora, now found only in comparatively low latitudes, extended up to the Pole, covering Greenland, the Polar American islands, and possibly much land between Greenland and Scandinavia which is now covered by water. The theory is, that on the accession of the ice epoch, this flora would be driven—slowly, of course, for geology reckons by ages for its minutes—to the south, down to the extremity of the Greenland peninsula in its district, and down to the latitude of the Alleghanies and White Mountains in their districts. In Greenland, the forms of vegetation best suited to bear cold, what would be called now "Arctic vegetation," would survive: the rest would perish, on account of the intervention of sea between Greenland and the tracts to the south, on to which,

otherwise, the less hardy flora might have been driven. But on the American continent there would be no sea to intercept what we may call the migration of the less hardy plants: they would be forced, by the change of climate, southward into lands already occupied with their own flora, where some would establish themselves in hitherto strange company. But now succeeds another geological epoch. The ice age gradually passes, and a time of moderate temperature gradually succeeds it; again comes, consequently, a migration of flora; this time northwards. It is easy, and at the same time a pleasant exercise of the intellect, to imagine what must have been the result. On the mitigation of the glacial epoch, Greenland, being a peninsula, would be repeopled with plants only by the return northward of the species which had been previously driven into its southern extremity; there would thus be a uniform flora throughout its length, and this an Arctic one. But in America, the absence of a bar of sea would leave different circumstances in operation. The Scandinavian plants formerly driven south by the ice period would not only, when things became milder, return northwards, but would creep up the Alleghanies and the White Mountains; and the result, as stated by scientific men, would be that, on the one hand, many Scandinavian plants which had been driven, in the case of Greenland, into the sea, and perished, but were preserved in America by the continuity of the land, would reappear on the Polar islands and Labrador, *accompanied by sundry American mountain plants;* on the other hand, a few Greenland Scandinavian plants, which had been lost in the struggle with the American types during their migration, and which hence do not reappear in Labrador and the Polar islands, might well be preserved in the Alleghanies and White Mountains. Lastly, it has been pointed out, as another necessary result of the events on the surface of the earth under notice, that a number of Scandinavian plants which, in accordance with the known influence of surroundings, had become modified in form and habit during the sojourn in America, in conflict with the American types, would appear in the Polar islands as American varieties or representative species of Scandinavian plants.

Now all these presumed results of what are believed to be what in the life of the earth are facts; but the ingenious outline or hypothesis, sketched by botanical geologists, and geological botanists, wants filling up in detail; and the renewal of Arctic exploration, it may easily be conceived, must do much to fill in the sketch. Botanists want especially additional exploration by botanical eyes in the northern parts of Greenland; they want to know temperatures of air and waters, directions of rivers and currents capable of conveying seeds and germinating portions of plants, the habits of migratory birds and animals, who, be it noted, are among terrestrial distributors of seeds; they want to know what traces there may be of ancient forests now transformed; and "more light" generally upon many other matters; especially as a certain section of scientific men are inclined

to the belief that ordinary known circumstances in the past history of the globe are not sufficient to account even for the botanical phenomena which are already ascertained; and look to further facts to encourage them in the startling speculation that there have been at various epochs, and may therefore be again, shiftings of the direction of the earth's axis to the plane of its orbit, and perhaps variation in the ellipticity of the orbit itself.

We have gone at some little length into the botanical aspects of Arctic research as an example of what fascinating—it might almost be said tremendous—problems may be affected by it; hardly secondary, however, is the interest with which the devotees of other branches of science will watch for the result of the expedition. Indeed, when one contemplates the vastness of the field which science is, in the present day, occupied in mapping out, here in dim outline with many gaps; there in detail, outline having been established beyond dispute; a liberal mind becomes filled with a sense of the nobility of the task which the present band of English explorers have set out—not indeed to accomplish, but to further as much as in them lies towards completion. Zoology, with its branch subject Anthropology, expects information on the prodigious and teeming insect life of Arctic waters, where myriads of animalculæ are engaged in living and dying, and by their lives and deaths producing what will in future ages be strata of rock; on the corals and sponges of the icy regions—regions not by any means, as has sometimes been thoughtlessly assumed, unfruitful of life; on the migration of birds; on the circulation and respiration of animals; on the mysterious wanderings of certain tribes of northern men, "of which traces are found in every bay and on every cape in the cheerless Parry group"; on the stature, features, and physique generally of men living in perpetual frost; and of the habits and contrivances of tribes, the conditions of whose existence in the present day are nearly those of the "stone age" of the world.

Enough has been said, we trust, to reassure the reader who may have doubted as to the adequacy of reason for a renewal of Arctic research. On this head, in truth, the considerations adduced are overwhelming, and no one of the courageous band who have gone out in the "Discovery" and "Alert" need entertain any misgivings of the value of his labour. It is hardly too much to say that every observation made, and every note taken, will be an appreciable benefit to mankind.

But the benefit may not be immediate to any particular individual or section of Englishmen, or of mankind; and from this it arises that Arctic exploration becomes necessarily the task of governments. Private Arctic expeditions, so-called at least, have indeed been not unknown in the history of Polar exploration; but these have seldom been really and entirely the result of private motive. The benefit to be anticipated from scientific search is not likely to take the form of property or gain to individuals, incalculable as may be the real gain to mankind

generally. It is to no one's individual interest to solve great problems in botany, zoology, electricity; and slow indeed would be the progress of filling in the outline maps of science if the collection of the necessary knowledge were left to the promptings of private interest. Merchant ships would push far north, but it would be for the purpose of finding more whales to harpoon, or more seals to skin, or furs to cure; some scientific facts might slowly and incidentally be evolved; but the want of making knowledge a first motive, and still more the want of knowledge in the observers, must always make the benefit to science from private voyaging in Polar regions inappreciable. It is, as we have said, necessarily and legitimately a thing in the province of governments; and no thinking man can do other than firmly and earnestly approve the determination which has been arrived at to resume what may soberly be termed the noble work of Arctic exploration.

A short sketch of the past history of Arctic search will not be uninteresting as showing us what expectations and hopes we may be justified in entertaining during the absence of the present English expedition. It has been stated above that no adequate private motive exists for the prosecution of Polar search. This is true of the task as it now stands, for the objects to be served now are in a preponderating degree scientific; but in its early origin Arctic search was undoubtedly prompted by motives of commercial interest. Early Arctic voyages were voyages for geographical and navigatory discovery. The history of their origin lies in trade rivalry. In the fifteenth century the discoveries made by the Portuguese and Spaniards, and the resulting wealth which these nations "tapped," became known and exaggerated in Europe, and the more northern seafaring nations were fired with emulation, jealousy, and lust for a share of the gold and stuffs of "Indy and Cathay." But Spain was not easily to be forced to share plunder with other claimants; her power and resources were then at their greatest, and she succeeded in placing so many obstacles in the way of ships seeking to poach in what she had made Spanish preserves, that in the end the northern seafaring peoples gave up the attempt to penetrate to India and China through Spanish lines, and turned their thoughts to a search for a passage to the regions of wealth by, as it were, a back door, nearer themselves. Hence the origin of a matter which has its full tale of adventure, heroism, tragedy, and achievement,—the North East and North West Passages.

The first attempt to circumvent Spanish commercial preponderance in the East was made in a north westerly direction, by John Cabot, a Venetian merchant settled at Bristol, in 1497, who made for the coveted region, with the result that he discovered Newfoundland, but did not find the desired route to the East. John Cabot received as reward—we do not say sole recompense—a sum of 10*l.* from Henry VII, which is thus entered in the privy-purse accounts:—"1497, Aug. 10. To hym that found the new isle, 10*l.*" Similarly Gaspard Cartereal and

his brother, making three voyages in the track of John Cabot, ran against Labrador, and were foiled. With them, and thus early, began the tragic features of the history of northern exploration; both the Cartereals, with all their followers, like some later explorers lamented by England, perished in their work. Nevertheless efforts continued; but with no definite result: presently attention was turned to the north east for a possible passage, England taking the lead, and sending out, in 1553, Sir Hugh Willoughby, with three ships, which were fitted out by the celebrated Sebastian Cabot, son of John. Accident has often, in the history of Polar navigation, led to more important results than direct search; and one of Sir Hugh Willoughby's ships, driven away from its consorts by a storm, found itself in the hitherto unknown White Sea. The other two ships found Nova Zembla, and then were driven back: their crews had accomplished something, but again paid the penalty of their lives: they were frozen to death in Russian Lapland, in winter quarters. The Dutch after a while joined in the search, their first commander, Barentz, perishing in his efforts; much was added to geographical knowledge by these expeditions, which succeeded each other about every quarter of a century. After a while Russia took up the matter, and attempted exploration by sledges: the impracticability of a North-East passage was considered to have been established by a Russian expedition of 1820–23. But the incidental results were a gradual extension of definite coast lines in the northern regions of the map of the world, and although the original desire of circumventing Spanish commercial preponderance was thwarted, the sum of human knowledge was increased, for the use of future ages.

Meanwhile, voyages in search of a north-west passage had been going on, with similar results, tragic and geographical. Frobisher succeeded John Cabot; Captain John Davis labelled his name on the globe at "Davis's Straits" in 1585–8; Henry Hudson, who had previously commanded one English and one Dutch expedition in search of a north-east passage, turned to the north-west, and discovered Hudson's Bay. Not the least remarkable of Arctic tragedies was that of Hudson, who began northern exploration in a little ship with a crew of ten men. Having in his last voyage discovered the strait and bay which bear his name, he found himself in critical circumstances in these desolate regions; and an incautious expression, to the effect that he might have to leave some of the party behind, led to a mutiny among his crew, the majority of whom forced Hudson, his son, and a few others into a small boat, and left him to perish. An expedition was sent out from England in search of him, but no trace discovered. Baffin, after this, in 1616, and Fox, in 1631, wrote their names for ever on the world's surface; and various other voyagers made more or less unsuccessful attempts to solve the north-west passage problem, which was then considered the crux of polar exploration, and had attached to it the offer of a reward by Parliament of 20,000*l.*

Almost exactly a century back, that is to say, in 1773, the first of what may be considered modern Arctic expeditions was fitted out. The work had by this time become divested, to a great degree, of the commercial motives which had first prompted it; Spain no longer effectually barred the ordinary ways to the East, and it had begun to be evident that neither a north-east nor a north-west passage, if found, would be of much practical use. On the other hand, the incidental discoveries in various branches of science had become so interesting and appetizing to scientific men, and were gradually developing such prospects of great results, that the Royal Society now took up the matter, and, for the first time, an expedition was fitted out with science, in its broader sense, as primary motive. Rivalry with Spain had done much, the gains of morse-hunting had led to something, in Arctic discovery; but the time had now arrived when those motives had practically exhausted themselves. To this expedition, commanded by Lord Musgrave, one fact of special interest attaches: Nelson served in it as a midshipman. It achieved, however, but little which can be quoted as definite result, though adding much of detail to our knowledge of regions already known to exist. Throughout the interesting history of Arctic research, the results have been of two classes: there have been great discoveries, which have been for ever afterwards engraved upon maps; and there has been infinite collection of minutiæ for filling in of outlines. The world finds it easy to remember the heroes of the former class, but is too apt to forget those who have laboured in the other and less brilliant division.

Lord Musgrave penetrated to a less high northern latitude than the unfortunate Henry Hudson had reached before him: Captain Cook, who made a dash for the Pole by way of Behring's Strait, fell back at a still lower point. Meanwhile, Parliament offered 5,000*l.* to the first crew which should penetrate to within one degree of the North Pole; and Scoresby, originally a Hull whaler, did something; he reached a point only 500 miles from the mysterious centre of terrestrial revolution. Scoresby must ever retain a prominent place in the history of polar exploring; he collected, in his several voyages, much and varied information, and was the inventor of a new form of search which deserved more success than it attained, that with the aid of dogs. Captain Parry, another officer whose name will be found in all future time upon Arctic charts, was chosen to command an expedition on the dog principle; the principal feature of which, after the dogs, was the vehicle which was constructed for traversing alternately ice fields and water. By means of his dogs and the "Scoresby sledge," Captain Parry travelled over considerable districts; but after encountering and conquering innumerable hardships, the mortifying discovery was made—perhaps the most mortifying that history records—that while he was travelling northward over ice fields, the ice fields were themselves moving south! The result was, literally, motion but no progress; after three days' hard travelling, observations taken showed the party

in the same latitude as they were at the outset. It was not in human nature to struggle against such a disheartening state of things, and Parry returned to tell the singular story of his failure. Perhaps the most valuable result of Parry's journey was the experience it afforded in regard to fittings, provisions, and clothing required for Arctic travel.

A period in polar exploration came in 1831–3, on the discovery by Sir James Ross of the exact position of the magnetic pole. It is an arduous business, the whole matter; and just as a man ascending a mountain is glad of an excuse to rest in the occurrence of any object of interest, or the attainment of any definite point, so the nation seems to have become at times out of breath, so to say, in the pursuit of Arctic exploration, and to have willingly accepted any definitive discovery as an occasion for rest in a laborious service, demanding concentration of much official and individual energy upon its prosecution. Meanwhile, the traversing of ice regions had gradually become less dangerous, as shown by the fact that, during the fifteen years of activity which culminated in Sir James Ross's determination of the magnetic pole, no loss of life had occurred.

A very different result befell the next great English expedition, which marked the course of Polar exploration with its deepest tragedy. It is round the name of Sir John Franklin that centres, in modern times, the painful romance of Arctic discovery. The new feature now brought to the aid of science in exploring these regions was steam. Two sailing ships, the *Erebus* and *Terror*, with auxiliary steam power, were placed at Franklin's disposal, and he left England in 1845, in search of the long-sought north-west passage; never to return, as it proved. Year after year passed: all England, not to say all the civilized world, strained its eyes northward, watching for the navigator's return; the idea of Arctic exploration for its own sake was chilled, and from the time of Franklin's disappearance, the even nobler motive of rescuing the unfortunate navigator and his men from the icy wilds into which they had disappeared was the moving power of polar expeditions. In the course of eleven years, nearly twice as many separate expeditions were sent out, from England and other shores, to find Franklin, and it was not till 1859 that his fate was definitely ascertained by a little expedition sent out by his widow, and commanded by M'Clintock. The story is fresh in the minds of the nations, and is commemorated on a public monument; it need not be further detailed here.

What were the precise results of Sir John Franklin's three years of exploration we shall never probably learn, for their records perished with the men; but the search for the hero was incidentally attended with the acquisition of vast masses of information; and it was during the time Franklin's fate was still in suspense that M'Clure solved the problem of the north-west passage. The expedition of Collinson and M'Clure was one of the many sent out in search of Franklin. It left England

in January, 1850, and in 1851 got fixed in the ice. Next year (1852), Sir Edward Belcher was sent out to find M'Clure, and found him. M'Clure had gone out by Behring's Strait, Belcher by Baffin's Bay, now corrected to Baffin's Sea, so that they made the long desired north-west passage between them; M'Clure and his party alone, however, passing from one ocean to the other. A problem of centuries was thus solved, long after the motives which prompted it had been forgotten.

During the period of search for Franklin much useful experience was acquired, and the methods of meeting and overcoming the natural obstacles of Arctic travel were wonderfully developed. No notable mortality prevailed: on the contrary, the death rate was less than among men of the royal navy occupied on any other service, though, of course, the men sent to the far north were of picked constitution.

On the solution, in 1859, of Franklin's fate, England withdrew altogether from the field. Not so other nations. America made a push for the Pole by way of Smith Sound, at the head of Baffin Sea; and it is in this direction that the expedition sent out from England in 1875 operates. Germany joined in the work, attempting the goal by way of the eastern shore of Greenland: as a result Prince Bismarck's name was attached to a new cape on the north-east of the Greenland continent; but the Germans made no very notable discovery, and did not penetrate so far north as others had already done in other directions. Swedish and Austrian expeditions achieved analogous results, and brought back many valuable observations.

Thus stood the state of Arctic discovery, when, in 1874, at the instance of the Royal Geographical Society, the English Government again agreed to entertain the project of an expedition. At this moment, subject to what may have been done by the expedition of 1875, the highest northern latitude reached is that to which Parry penetrated, no less a time back than in 1827, namely between 82 and 83 degrees; so that with England remains the honour both of discovering the north-west passage and of reaching the highest latitude yet attained.

The motives which prompted a renewal of Arctic exploration have formed the subject of the first section of this paper: it remains to recite the circumstances which seemed to favour the idea of allowing these reasons to prevail. If the English expedition of 1875 achieves, as we all hope, great things, and crowns our national fame in this field by reaching the Pole, it will have to be remembered that America has been the most efficient pioneer. It is the discoveries by the American expedition in the neighbourhood of Smith's Sound which have chiefly encouraged explorers to try again. With equipments much inferior to that which we can command, the Hall expedition passed by Smith's Sound without difficulty to the 81st parallel; what is still more important is the presumption, from the ascertained existence of a constant current setting southwards through Smith's Sound, than there is open water further north. More-

over the American party who went out in the *Polaris*, and ascertained the significant facts connected with Smith's Sound, found in latitude 82° 16′—their highest point—*a milder climate than in more southern positions.* This, of course is not unprecedented, the lines of equal temperature on the earth's surface being by no means entirely parallel with lines of latitude. Another fact of importance is that the *Polaris* found animals comparatively abundant near their winter quarters, in latitude 81° 38′, including the musk ox ; and another significant fact is that drift wood was picked up in their extremest positions, coming down from the direction of the Pole. What, again, makes an Arctic expedition more feasible than it ever was before is the advance in construction of steam vessels. The ice of Melville Bay, which used to beset sailing vessels for weeks, has in these later years been got through by a screw steamer with no longer delay than something under three days.

Under these circumstances Mr. Disraeli, as the head of Her Majesty's Government, agreed by letter in November 1874, to the equipment and dispatch of another Arctic expedition, of which now, lastly, it will be a duty to give a few particulars.

The matter was remitted to the Admiralty, who a week after the date of the Premier's assent, issued letters appointing a committee to determine the scope of the search, and report on all points connected with the equipment of the party. Three Admirals, Richards, McClintock, and Sherard Osborn, formed this committee ; and they came without difficulty to the conclusion that the route to be adopted should be by Smith Sound, —the American route, as it may be justly termed. They did so, not only for reasons which have already been mentioned above, but further from the very excellent consideration that this route —from the fact that the Sound has continuous lines of coast on either side, which have already been roughly laid down, and offer points for depositing stores upon which to fall back in case of necessity—gives an excellent line of retreat. The same circumstances, with the additional facts that Danish settlements on the west side of Greenland are comparatively accessible from Smith's Sound, and that steam whalers frequent a high latitude in Baffin Sea, make the Smith's Sound route specially accessible to relief parties.

The committee advised the fitting out of two ships, both to be screw steamers, strengthened and specially fitted for the service : for this purpose the *Alert*, a royal navy ship, and the *Bloodhound*, were selected by Sir L. M'Clintock. The *Bloodhound* was a steam barque built in Dundee in 1873 for the whale fishery ; she has a length over all of 166 feet, two decks, frame, topsides, main and upper deck beams, stancions, and outside planking, of English oak : wire rigging, plated at the bows with iron half-inch thick, iron-kneed, and in other respects well suited for her perilous errand. The engines are 96 horse-power nominal, but work up to five times that figure ; her maximum speed is eight

knots. Her tonnage is 668, builder's measurement, 556 tons gross register, 378 tons net register.

Her Majesty's ship *Alert* is a steam sloop of 1,045 (751) tons, and 100 nominal—really about 380—horse-power. She has been strengthened and fitted with new engines and boilers for the special service required of her.

The purchase of the *Bloodhound* was arranged between the Admiralty and her owners at Greenock, Messrs. Baine and Johnston; who, to their credit, placed her at the country's disposal at a price to be agreed upon by Sir Leopold M'Clintock on the one part and Messrs. Steele and Co. on the other. The Admiralty officers named 15,620*l.* as the price; Messrs. Steele 20,000*l.* After a conference on the points of difference, 18,000*l.* was agreed upon as the sum to be paid, this including some compensation to the owners for the loss of a season's seal fishing.

The *Alert* is the "senior ship" of the Arctic expedition, the *Bloodhound*, re-named the *Discovery* on her adoption into the fleet, is "second ship." Besides the usual officers and sub-officers, the ships carry a naturalist, "ice quarter-masters," and Esquimaux or Danish dog drivers. On the *Alert* are 62 souls; on the *Discovery* 59; so that the party makes 121 in all. The proportion of officers is large for the size of the ships; and every officer and man has been picked for the service.

It is hardly necessary to state that the Arctic expedition is under the command of Captain George S. Nares, a F.R.G.S., and a man of special mark in the science of his profession, as well as of previous Polar experience. He is the author of a work on seamanship which is highly esteemed in the Royal Navy, and has been senior lieutenant of the *Britannia*, the training ship for royal naval cadets. Much of his professional career has been occupied in surveying. In Kellett's Arctic expedition of 1852–4 he held the (now obsolete) rank of mate, and distinguished himself in the sledge travelling; and—what is almost as much to the purpose—in the winter amusements of the officers and crew. Mr. Clements R. Markham, the compiler of the interesting "Arctic Navy List," dwells, with much reason, upon the social talents of Arctic explorers; he recites that Captain Nares acted "Lady Clara" in the historical drama of Charles II, while a mate in Kellett's ship, the *Resolute;* and "in the second winter read papers, with diagrams, on the laws of mechanics, and on winds." It might have been mentioned before this that amusement has not been forgotten in the equipment of the 1875 Arctic expedition, and that all the appliances of amateur acting have been accounted among the necessaries of the outfit. Captain Nares, however, has done something besides distinguishing himself as an amateur actor of a female part. In the autumn travelling of 1852 (Kellett) he was away 25 days, and conquered nearly 200 miles. On the same expedition he commanded a sledge party, and traversed 665 miles in 60 days. In 1854 he was away 55 days in extreme cold. It may be added that when summoned home for Arctic service he was in command of H.M.S.

Challenger, the ship engaged in the wonderful work of deep sea exploration. Cape Nares, a S.W. point of Eglinton Island, will bear his name to posterity as a discoverer.

Captain Henry F. Stephenson, who commands the second ship, has less special experience, and, although a man of mark in the royal navy, has in the present expedition his first opportunity of making a name on Polar charts. He commanded a gunboat on the lakes of Canada during the Fenian troubles there of 1866–7, and was Sir H. Keppel's flag-lieutenant in China.

Commander Albert H. Markham, who is second in command of the advance ship, bears a name which will be recognised at once as that of a geographer. It is, however, as yet, to his cousin Clements R. Markham that the association of the family name with Arctic investigation is due. This gentleman, editor of the already mentioned "Arctic Navy List," was editor in former Polar travels of "The Minavilins, an Arctic newspaper;" and it is very much to his pen that the revival of Polar exploration is due. His cousin, Albert H. Markham, who now takes his place in active Polar search, has seen no service in a Queen's ship amongst the ice regions; but, what is perhaps more indicative of geographical enterprise, went for an amateur whaling cruise in 1873 up Baffin's Sea and Prince Regent's Inlet on his own account. His chief naval service has been in the *Rosario* among the Santa Cruz and New Hebrides islands.

Not the least remarkable man of the group who are absent up Smith's Sound, is the chaplain, the Rev. W. H. Pullen. This gentleman was a minor canon, or musical priest, of Salisbury Cathedral; and while such, showed some independent thought in connection with the special field in which he was placed; but he will be more widely recognised as the author of the famous brochure entitled "Dame Europa's School," which found so many thousands of amused readers during the late war between France and Germany.

Much will depend, it will readily be believed, upon the lay scientific staff of the expedition, and it seems but very scanty provision to make that room should be found only for two persons, the "naturalists" already mentioned. But these gentlemen, Mr. Chichester Hart and Captain Fielden, are nominees of the Royal Society, selected for their "acquaintance with as many branches of natural history as possible." Moreover, all the superior officers of the ships are men of high scientific education, trained by the modern curriculum of naval education to observation of scientific facts.

The six ice quartermasters were engaged at Dundee and Peterhead, among the whalers there; these receive about 50*l.* a year each, doubled while actually absent. It was laid down that none of the six must be more than 35 years old; but the requisite number below this limit could not be obtained, and four of the six are older. Five of them are "harpooners" who have made from 10 to 20 whaling voyages; one is a boat steerer, who has been at the rudder of whale boats six seasons. All are

married, and one has nine children ; three have seen the Arctic winter, one having wintered in Arctic regions five seasons. Two of them understand dog driving.

For the regular dog drivers our Government had to apply to the Danish Minister of the Interior. There has been recently an epidemic among the Greenland dogs, and it was doubted whether the desired number, 60, could be collected to meet the expedition ; nor was it quite certain if the requisite drivers could be engaged.

Many interesting details regarding the victualling and clothing of the men might be mentioned were space at disposal for the enumeration of such particulars ; it must suffice to say that every eligible form of portable food and the most carefully devised articles of apparel have been provided for the expedition, after a most searching consideration of the results of former experience. In respect of the stores it may be mentioned that considerable quantities were left behind, properly deposited, by the last American party, the *Polaris* expedition, at various points on the west coast of Greenland, as to which the United States Government has furnished our Admiralty with clues to their discovery, and cordial permission to use them. These embrace pemmican, preserved meats, Polar cake, tripe, ham, sardines, pork, molasses, chocolate, bread, coffee, oatmeal, sugar, cheese, preserved milk, vinegar, rice, lime-juice, wheat, tea, "pea-beans," wheaten grits, alcohol, brandy, whiskey, pipes, tobacco, soap, powder, shot, "goggles," navy chewing tobacco, clothing, tools, and firearms. The United States ask that if the pendulum left by their expedition at Life Boat cove be recovered it may be returned to them, as well as any other instruments, arms, implements, or books which may be found. The stores were some of them "cached," or covered up in a mound ; but in other instances left in boats, or a hut, or merely piled on the ground.

It has been distinctly laid down by the Admiralty that "the scope and primary object of the expedition should be to attain the highest northern latitude, and, if possible, to reach the North Pole" ; to this is added an injunction to "explore, from winter quarters, the adjacent coasts within the reach of travelling parties." For the movements of the two ships, the lateral limits are prescribed of the meridians 20° and 90° west longitude. The ships were to touch at Disco, Pröven, and Upernavik, for dogs and Esquimaux drivers ; they were to examine both shores in the vicinity of Capes Isabella and Alexander, and fix upon a position to which, in 1877, a relief ship shall be sent ; the decision was to be recorded in triplicate documents, and deposited on Lyttelton Island, one record being placed in a conspicuous cairn near the shore, another laid down beside the cairn, a third buried 20 feet north of it. The triplicate records were also to contain a narrative of proceedings up to the date of deposit, and any information considered necessary to give the relief ship of 1877. This done, the ships were to proceed up Smith Sound, taking observations with a view to securing a possible retreat,

and erecting cairns at intervals, in which further records and any desirable communications were to be deposited in the same manner as at Lyttelton Island. Small depôts of provisions and a boat were to be left at one or two points most accessible for possible contingencies. One of the two ships was to keep at such a distance only from the rendezvous fixed upon for the relief ship in 1877, as would admit of the whole expedition retreating from her to the rendezvous; the advanced ship was, as far as possible, to keep within retreating distance of the supporting ship. It was laid down accordingly that both ships must not pass the 82nd parallel of latitude.

At or near the 82nd degree of N. latitude, then, the two ships were to part company, the leader of the expedition drafting into his party such officers and men as he might think fit from the second ship. Pushing on northwards, the main party was then to continue the exploration of the coast line; but it was laid down that the two ships were not to winter at a greater distance from each other than 200 miles; and left to the discretion of the leader of the expedition whether the advance party should not return to the second ship for the winter, starting afresh northwards in the spring of 1876. In early spring sledge exploration was to be begun: six sledges and four dog sledges would leave the advance ship (or the two ships if they wintered in company) and push northwards; of these the greater part would drop behind after seeing provision made for the line of retreat, the ultimate "North Pole party" consisting of the leader of the expedition, and the most vigorous and suitable of the *personnel*. The returned sledge parties would then be sent out in different directions to explore and take observations.

The leader of the North Pole party, or advance portion of the expedition, had orders to use his best endeavours to rejoin the second ship, in any case, before the winter of 1876, and, if his efforts had been "reasonably successful," to return to England. But the option was left of remaining out a second winter if the work achieved should not be definitive, but nevertheless promising of ultimate definitive success. It was laid down that next year the leader of the expedition should be at liberty, in case his efforts to reach the Pole might have been successful, or the chance of extricating the vessels doubtful, to abandon his ships and retreat upon the relief-ship, third, &c., which was agreed to be sent out to the entrance of Smith's Sound in 1877. One ship was not, under any circumstances, to attempt to winter in the Polar regions without the other remaining within reasonable distance; if the advance ship's crew remained up Smith's Sound, the second ship, or the relief-ship must remain at its entrance.

Such is a general statement of the circumstances under which in 1875 we renewed the arduous and worthy task of Arctic exploration.

JOHN CROWDY.

LIBRARIES, ANCIENT AND MODERN.

A LEARNED German of the 17th century sought to show that there were libraries before the Deluge, but the apocryphal book of Enoch, and the carved pillars of Seth, were the strongest arguments for his contention. Without, however, going so far back, we find libraries in existence in very remote ages, and it may not be uninteresting to trace the growth of the system which has at last given us a library not only in every public institution, but to a greater or less extent in every private house.

I. LIBRARIES OF BABYLONIA AND ASSYRIA.

Layard, in the course of his excavations at Kouyunjik, came upon a record chamber filled up to the height of a foot or more with inscribed clay tablets, forming a body of literature greater in extent than all that has yet been afforded by the monuments of Egypt. Scarcely ten of these tablets were entire, although there is no evidence of wilful destruction. The piecing together of these fragments—more than 30,000 in number—has been the constant employment of ripe scholars for years past, and the process is still going on. Considerable progress has been made in the interpretation of the arrow-headed characters with which the "clay books" are covered, and the results obtained are of great interest. The record chamber of Kouyunjik has been called the Royal Library of Asshur-ban-ipal, a title not inappropriate, as it was not a mere collection of national archives, precious as these would have been, but a repository of literature of every class. Each tablet, as a rule, is a flat piece of baked clay, having on its obverse and reverse a page of very small, closely written arrow-headed characters impressed on the clay whilst yet moist. The tablets are numbered consecutively like the pages of a book, and each has a sort of running title. Asshur-ban-ipal was a patron of literature, and many of the tablets record his name in their colophons: "Asshur-ban-ipal, the great King, powerful King, King of Nations, King of Assyria, according to the documents and old tablets of Assyria and Sumira and Akkadi; this tablet and the collection of tablets I wrote, I studied (?) I explained, and for the inspection of my Kingdom, within my palace I placed. Whoever my written records deface, and his own records shall write, may Nabu all the written tablets of his records deface."*

A considerable portion of the library of Nineveh consisted of transcripts of the older Akkadian literature referred to in the colophon just quoted, accompanied by Assyrian translations. Among the works of the Royal Library we find Akkad vocabularies, syllabaries, and grammatical aids of various sorts, intended to facilitate the acquisition of that language. "These

* "North British Review," li, 320.

may be considered as the first conscious attempts at the formation of a grammar."* They are probably older than the earliest of the Hindoo grammarians.

There is a work on Astronomy and Astrology covering seventy tablets, a book of portents extending to more than one hundred tablets, a treatise on Mythology, comprising above one hundred and ten tablets, a history of the transactions between Assyria and Babylonia, histories of different Kings, law tablets, the well-known Canon of Eponymi, the most important document known in connection with Assyrian history, as from it, though no perfect copy exists, much of the chronology of the Assyrian Empire has been deduced.

Lists have been found of plants and minerals, of the timber trees employed in building, or furnishing of stones fit for architecture or sculpture. Still more interesting is a list of the species of animals known to the Assyrians, classified in families and genera. No doubt the great divisions of this classification are of a rudimentary nature, but we may well be astonished to find that the Assyrians had already invented a scientific nomenclature similar in principle to that of Linnæus. Opposite the common name of the animal is placed a scientific and ideographic name, composed of one invariable sign, and of a characteristic epithet varying with each species.

There are also tablets of a geographical, statistical, mathematical, devotional, and poetical nature. The bulk of the Akkadian literature is mythological, consisting of names of gods, prayers against demons, &c. The tablets were preserved in the collections of libraries in the various temples and palaces of Babylonia, and afterwards in Assyria, and it was the custom from time to time for those in charge of these literary treasures to have fresh copies written from the originals†.

The library at Calah (Nimrud) was written chiefly under the care of Nabu-zuqub-gina, who was the son of Mamdak-mubagar, the librarian and grandson of Gabbu-ilani-kamis, the great librarian. He had charge of the tablets from B.C. 716 to B.C. 684.

Their pantheon was thronged with gods. One of the early tablets gives 50 great gods of heaven and earth, seven magnificent gods, 300 spirits of the heavens, and 600 spirits of the earth.†

The Akkad people some time before the 19th century, B.C., were conquered by a Semitic race; they adopted the system of writing, but they imposed their own language upon the people.

Assyria was colonized from Babylonia, and in the earliest periods its kings were simply governors. That they employed the papyrus as a writing material seems to be certain, and the change from the rounded form, in which the hieroglyphics were written upon its smooth surface, to the wedge-shaped characters we now call cuneiform, seems to be due to the neces-

* Sayce's "Assyrian Grammar," p. 17.
† "North British Review," li, p. 307.
‡ Ibid., li, 309 .

sity for indenting them upon the moist clay tablets when that became the prevalent method.*

The earliest known "man of the written tablets" was a Babylonian, named Amel-anu, who lived in the reign of Ernug-sin, about sixteen centuries before the birth of Christ. He is the first librarian in the world of whom we have any record.

The title is an Akkadian one, and it is therefore to these primeval dwellers in Babylon that we must look as the originators of libraries. From this ancient source come the legend of Izdubar, the narrative of the Flood, &c., which have excited so much interest and attention. The Akkadians, it should be remembered, were a non-Semitic people. The Semite Assyrians borrowed from them to a large extent both religion and literature. This has raised the question whether the Hebrews did not derive their primeval traditions from Akkadians.†

The city of Asshur—probably the ruins now called Kalah-Shergat—was the seat of the first known Assyrian library. The Assyrians were believers in immortality. One of the tablets has been translated: "Length of days—long lasting years, a strong sword, a long life. Extended years of glory—pre-eminence amongst kings—grant ye to the King my Lord, who has given such gifts to his gods! The bounds vast and wide of his empire and of his rule may he enlarge, may he complete! Holding over all kings supremacy and royalty and empire, may he attain to gray hairs and old age! And after the gifts of these present days in the feasts of the lands of the silver sky—the refulgent courts, the abode of blessedness, and in the sight of the happy fields may he dwell a life eternal—holy—in the presence of the gods who inhabit Assyria."‡

From the great attention now being paid to the study of Assyrian antiquities, we may hope in the course of a few years to be able to understand much of their religious and social life.§

II. Ancient Egyptian Libraries.

The most famous library of Egypt was that named by Diodorus Siculus, as having been erected by Osymandias. It had, he says, an inscription signifying that it was the medicine of the mind. This royal library has been identified in modern days as the Ramesseum at Thebes. On the door-posts are sculptured, Thoth, the president of the hall of books, and the goddess Saf, the lady of letters.

There are other Egyptian libraries known to us, and from one

* Sayce, "On the Use of Papyrus by the Accadians;" "Transactions Society of Biblical Archæology," i, 344.

† See Mr. Sayce, "On the Origin of Semitic Civilization," "T. S. B. A.," i, 294.

‡ Mr. H. Fox Talbot, "T. S. B. A.," i, 106.

§ The excellent work which the Society of Biblical Archæology is now doing for its elucidation is deserving of great praise. The "Transactions" contain much that is of the highest interest, and the "Records of the Past" give the result of the works done in a more popular form. The works of Mr. George Smith, Mr. A. H. Sayce, and Mr. Francoirs Le Normant are indispensable to a serious examination of the faith or literature of the early dwellers in Babylon and Assyria.

at Memphis, Homer was accused of having stolen his poems. We are now beginning again to be able to read the literature of Ancient Egypt; not only her monumental inscriptions describing the conquests of her monarchs, but the religious legends of her priests, and the fairy tales of her people, are gradually becoming accessible to the readers of the present age.

Much of the literature of the Egyptians has undoubtedly perished, and there are very few proofs now remaining of the scientific knowledge for which they were traditionally famed in the classical ages. Their most famous religious document, the so-called Funeral Ritual, has come down to us, because a copy or extracts from it was placed with every mummy. It is concerned with the pilgrimages of the soul after death. At last it reaches the judgment hall of Osiris. Around the room are seated judicial assessors to each of whom the soul proclaims its innocence of some crime.

"I have not blasphemed," says the deceased; "I have not stolen; I have not smitten men privily; I have not treated any person with cruelty; I have not stirred up trouble; I have not been idle; I have not made unjust commandments; I have shown no improper curiosity; I have not allowed my mouth to tell secrets; I have not wounded any one; I have not let envy gnaw my heart; I have spoken evil neither of the king, nor my father; I have not falsely accused anyone; I have not withheld milk from the mouth of sucklings; I have not practised any shameful crime; I have not calumniated a slave to his master."

The deceased does not confine himself to denying any ill-conduct; he speaks of the good he has done in his lifetime. "I have made to the gods the offerings that were due; I have given food to the hungry, drink to the thirsty, and clothes to the naked."*

Although perhaps not so important as the monumental inscriptions, the papyri still extant are varied in their character. Some of them are epics on the exploits of the kings, others geographical charts, others letters of celebrated writers. The astronomical MSS. show them to have had a knowledge of astronomy, although they were destitute of instruments. Various astrological and mathematical papyri have turned up, and we have even specimens of fictions. They had also their proverbial philosophers and writers on the conduct of life. From one of these we take a sentence:—"If the words are spoken in secret, the interior of a man is no secret to him who made it; if the words are spoken boastfully, or openly, he is present with thee, though thou be alone."

The essay in Mr. J. P. Mahaffy's "Prolegomena to Ancient History" (Lond. 1871), may be referred to for a complete survey

* This will recall the words of the Gospel. Another Egyptian sentiment is that expressed in the Decalogue in the words, "Honour thy father and thy mother that thy days may be long upon the land which the Lord thy God giveth thee." So the prohibition of oaths is found written by a scribe who, twelve centuries before our era, speaks thus: "A just precept to be found in old books of morality is this: Let not oaths spring from thy mouth" (Chabas, "T. S. B. A.," i, 176).

of Egyptian literature, and is later in date and more complete than the notice of Hieratic Papyri in the "Cambridge Essays" for 1858—almost the first attempt to place before the general reader the result of Egyptian decipherment in which its author, Mr. C. W. Goodwin, had borne a worthy part.*

III. Libraries of Classical Ages.

Amongst the Greeks we read of Plato, Euripides, and others, who were famous as book-collectors, and it is said that Pisistratus, the tyrant, founded a library for public use at Athens. Becker, however, very correctly observes, "A sort of mythical obscurity pervades these accounts. As respects Greece itself, the idea of founding public libraries awoke too late. Public spirit had long yielded to paltry private interests, and had not, on the other hand, been replaced by the liberality of high-minded princes. It was from a Roman Emperor, Hadrian, that Athens first obtained a rich and magnificent library."

The library of Lucullus, as we are told by Plutarch, "was ever open to all comers," and he may so far claim precedence over Asinius Pollio, who is usually said to have been the first founder of a public library in the Latin city. It has also been contended that Asinius only enlarged a foundation of Julius Cæsar's. Various public libraries are named as having existed at Rome. That founded by Gordian contained 62,000, or according to other accounts, 80,000 volumes.

Constantine the Great founded a library at Constantinople, which, at his death, contained 6,900 volumes, and, under Theodosius the younger, was said to number 120,000. Amongst its curiosities was a MS. of Homer, 120 feet long, written with golden letters on serpent's skin.†

The most famous library of the classic ages was that of Alexandria. Its size was unexampled, and it was one of the wonders of the ancient world. Its founder was a royal author, Ptolemy Soter, and its first librarian, Demetrius Phalerus, who after having been the idol of the mob at Athens, was forced to

* When the "Records of the Past," now being issued under the sanction of the Society of Biblical Archæology, are more advanced, the general reader will have fair data to work upon, easily accessible. The two Egyptian volumes already issued are full of interest. The "Funeral Ritual" has been translated by Dr. Birch in the fifth volume of Bunsen's "Egypt's Place in Universal History." In the fourth volume there is a brief survey of the literature. The bearings of Egyptian history upon the Pentateuch have been discussed by Canon Cook in the first volume of the "Speaker's Commentary."

† We may add that the modern Constantinople also has its public libraries, of which an interesting account is given by Mr. C. White in his "Three Years in Constantinople" (London, 1846). They owe their existence to the public spirit or piety of individuals. Several of the Sultans have thus distinguished themselves. Many have endowments, but these are applied only to the preservation and not to the augmentation of the books. The librarians are usually skilful caligraphists, and add to their salaries by making transcripts. The forty public libraries and the collection in the Seraglio were estimated to have an aggregate total of 75,000 volumes. Each library has a catalogue of authors and subjects. Some of the MSS. are of great beauty. At Aya Sofia is a Koran said to have been written by Ali, and the library founded by Osman III has one transcribed by Ali, and another by Omer. It is to be wished that some Orientalist would turn his attention to the history of the libraries of the East generally. There is a great paucity of information about them.

fly for refuge to the Alexandrian court. Under the patronage of the Ptolemies the library increased. From the Athenians Evergetes II borrowed the works of Sophocles, Euripides, and Æschylus, for transcription. Although he had faithfully promised to return them, he sent instead beautifully executed copies, and willingly forfeited the fifteen talents deposited as gage.

There were literary contests in connection with the library. On one occasion Aristophanes, the grammarian, was called to take the place of a judge accidentally absent. He decided in favour of an author who had not very favourably impressed either the other judges or the auditors. The accuracy of his award was however evident when he procured from the library the writers from whom the other competitors had plagiarized. This incident led to the appointment of Aristophanes as librarian, probably of the second library—the Serapeum. Another famous librarian was Callimachus, the poet, probably the first compiler of a catalogue whose name has come down to us. The old library —that of the Bruchion—perished in the conflagration of that quarter when the town was besieged by Julius Cæsar. That of the Serapeum suffered at the same time, but appears to have been afterwards refounded. When Theophilus, in A.D. 390, commenced a crusade against the pagans, the quarter became the scene of a bloody conflict between the disciples of the old and new faith. The books were pillaged and destroyed. Twenty years later the empty cases were seen by Orosius. Yet, in face of this fact, now well known, the fable narrated by Gregorius Bar-Hebræeus long obtained credence. Writing six hundred years after the taking of Alexandria, he gives the following dramatic account of the destruction of the library:—"John, the grammarian, came to Amrou, who was in possession of Alexandria, and begged that he might be permitted to appropriate a part of the booty." "Which part do you wish for?" asked Amrou. John replied, "The books of philosophy which are in the treasury (library) of kings." Amrou answered that he could not dispose of these without the permission of the Emir Al-Moumenin Omar. He wrote to the Emir, who replied in these terms.—"As to the books you speak of, if their contents are in conformity with the Book of God (the Koran), we have no need of them; if, on the contrary, their contents are opposed to it, it is still less desirable to preserve them, so I desire they may be destroyed." Amrou, in consequence, ordered them to be distributed to the various baths in Alexandria, to be burnt in the stoves; and after six months not a vestige of them remained.

John of Alexandria was dead before the date when this dialogue is said to have been held! No trace of the incident is found in historians until the latter half of the 13th century. The number of volumes in the Alexandrian library has been variously stated:—

Seneca rates the number of volumes at	400,000

Aulus Gellius	700,000
Eusebius, at the death of Philadelphus	100,000
Ammianus Marcellinus and Isodorus	700,000
Josephus, during the life of Philadelphus	200,000
Epiphanes, at the same period	54,800

But what did the ancients understand by the term volume?

The materials used for literary purposes were chiefly papyrus and parchment, the writing being on one side only, and with a liberal margin. Juvenal is very sarcastic upon one whose MS. was filled with letters to the edge, and written upon the back as well. The leaves were fastened together in one long sheet, which was wound round a staff, and styled indifferently *liber* or *volumen*. The "Iliad" would extend to twenty-four volumes. Ovid speaks of the fifteen volumes of his "Metamorphoses," and Cicero mentions the first two books and the third volume of the "Tusculan Disputation." In order to learn the average extent of these rolls, 144 "books" have been analysed, and found to contain about 7,755,903 letters, or an average of 53,860 letters per volume, which is about equal to nine pages and a half of Chambers's Encyclopædia. A volume of that work is equal to about eighty-five of the volumes in the Alexandrian library. The English Cyclopædia consists of 15,000 pages in twelve vols. The total number of letters is 144,000,000, or 9,333 to each page. Each volume is equivalent to 216 of the volumes of classical ages and the entire work is equal in extent to 2,600 vols. of the Alexandrian library. A still more familiar example is the commonest book we have amongst us. In the Middle Ages, the Scriptures, instead of being called Bible, the "book" was sometimes termed "Bibliotheca," the "library," from the number and variety of its contents. A Bible in small type, carried in the coat pocket, represents at least sixty-six of the books of the ancients.

From a passage in Aulus Gellius it seems certain the books were lent out to studious persons from the great libraries. The rage for book-collecting which Seneca satirizes had weak points, suffiently exposed to the view of a caustic observer. Even the baths he tells us had their libraries, and the crowd of books in public and private houses were bought not for the sake of learning but for ostentation, by men who cared for nothing there but the title and the covers. Accordingly we find that the ornamentation of the libraries was carried out with profuse luxury. The shelving and cases were often in precious woods, and the floors were paved with marble of a green colour, it being a hue which according to Isidorus is healthful to the sight. Round the hall and above the cases were busts and statues of the mighty dead.*

IV. Mediæval Libraries.

It is to the religious orders that we must look in mediæval times for the possession of libraries and the literary habits associated with them. Sometimes a scholar would bequeath his

* For further details and references the reader may consult a memoir by the present writer on the "Extent of Ancient Libraries," in the "Transactions of the Royal Society of Literature," vol. x, new series.

tiny collection to an abbey, sometimes the members of the orders would give individual books. The library of Monte-Cassino may be taken as the best of the monastic libraries alike in their grandeur and in their decadence. The riches of their collection had made them famous throughout Europe. Boccaccio with the scholar's avidity, was anxious to see their treasures. When he arrived at the convent, with the natural courtesy by which he was always distinguished, he begged as a favour to be shown the library. The monk only replied by pointing to a high ladder and saying, "Mount, for it is open." The scholar joyously rushed up the stairs, he found the room not only without key, but without door, books and forms alike were covered with dust. He began to open the books. Here a number of pages had been taken out, and there the margins had been cut away. He asked one of the monks the meaning of these shameless mutilations, and was told that the leaves of parchment had been taken out to be scraped and have psalm-books written on them; these were sold to the children, whilst the margins were converted into little books for women, the object in each case being to gain two or five sous to the irreverent scribes. Such were the degenerate successors of those who as early as the eleventh century had become famous as transcribers of Horace, and Virgil and Theocritus. And even now after twelve centuries of existence, and after the peculation of the fraudulent, and the carelessness of the idle, the library contains some 800 volumes of MSS. chiefly of the 11th and 12th centuries.

The change which had come over the monastic life is referred to Richard de Bury: "The monks in the present day are occupied not in correcting codices, but in emptying cups, which they mingle with the lascivious music of Timotheus, emulating his immodest manners, so that the sportive song and not the plaintive hymn rises now from the cells of the monks."

The Reformation in England was a blow to learning. The corrupt courtiers on whom the revenues of the dissolved religious houses were conferred cared nothing for the preservation of the literary treasures which the monks by years of toil had accumulated. The paintings were cut out of the pages, the gold clasps and the silver bosses were torn off the bindings, the fire was fed with precious MSS. and entire collections were sold for waste-paper. Bishop Bale justly speaks of this as a disgrace to England, "a most horryble infamy amongst grave senyours of other nations." Whole ships full were sent abroad to the bookbinders who used them in binding their printed books. Several fragments of ancient MSS. were discovered by Oberlin, in the covers of books belonging to the Strasburg library, of which he was keeper. The Bibliothèque Nationale at Paris was for a time enriched by some leaves of Paul's Epistles, dating from the sixth century. The original MS. of Magna Charta was rescued by Sir R. Cotton, from a tailor who was cutting it up for measures.

It has been mentioned incidentally that books appear to have

been lent out from the baths in the classical ages. The modern circulating library, however, finds its complete counterpart at Paris as early as 1342. The booksellers there were under the control of the university. They had to submit their transcripts for examination and approval, and to sell to the students at a lower rate than to the public. For the benefit of the poorer students they were compelled to have lists of their books hung up with the price at which they might be borrowed to be read. The highest charge seems to have been 10 sous for a Bible; 100 pages of "St. Gregory's Commentaries upon Job" might be had for 8 sous, and "S. Augustine's Confessions" (21 pages) for 4 deniers.*

If the figures relating to the libraries of Greece and Rome greatly overrate their actual extent, those about the mediæval collections err in the contrary direction, though not in so marked a manner. The library of Fulda, dating from A.D. 744, was found in 1561 to contain 794 MSS. In 1373 the library of the Kings of France had only 910 volumes. But here it may be observed that the same scarcity of writing materials which led the monks to cover the Republic of Cicero with Augustine's Commentary on the Psalms, also led to an economical packing together of several works in one volume. The catalogue of the library of the Monastery of Christ Church, Canterbury, illustrates this. The nine precious volumes brought by S. Augustine to aid him in his English mission are said to have formed the nucleus of a collection which, at the end of the thirteenth century, numbered 698 volumes. The separate titles appear to be over 4,000. Roughly speaking, each volume in this Augustinian library would be equal in extent to five of the volumes of classical times.

V. Libraries of Modern Europe.

There are few subjects upon which information of an accurate description is so difficult to collect as upon libraries. Whether we want to compare the relative provision of public libraries by different nations, or the amount of use made of them, the same obstacles present themselves. Few persons have any definite idea as to the meaning of high numbers, and have a difficulty in estimating rightly a crowd, whether of persons or of books. The Bibliothèque du roi at Paris was estimated to have 500,000 volumes, but an actual count showed that it only held 152,868. Apart from intentional and unintentional exaggeration, differences in the mode of reckoning, and even of binding, often prevent any safe comparison. The Imperial Library at St. Petersburg is said to bind up each pamphlet as a distinct volume. Thus the specifications of British patents would be yearly reckoned as an accession of between three and four thousand volumes, whilst at the British Museum they would be counted as less than 100 volumes. But undoubtedly the chief

* Merryweather's "Bibliomania in the Middle Ages," p. 35.

cause of our want of accurate knowledge arises from conjectural statistics.

The Libraries of Switzerland were made the subject of a special study by Dr. Ernest Heitz, whose work, published in 1872, records the existence of nearly 3,000 public libraries, and gives detailed statistics of 2,006. Most of these are modern in date, but some can claim an existence of centuries.* The Monastery of St. Gall has a library founded in the ninth century, and celebrated throughout the middle ages. From this home of learning came some of the classic MSS. used by the Alders and other printers. It contains now 28,345 volumes, a quarter of them being folios. It is rarely that the library statistics of a nation receive this sifting, and hence we are not in a position to state the comparative provision of public libraries in the various states of Europe. The following list is, however, believed to include all libraries containing more than 150,000 volumes, and a few that do not quite reach that figure :—

The Imperial Library of Vienna was begun about 1440, and has 385,000 printed books and 20,000 MSS. The early printed books are 15,000 in number, and the collection of prints extends to 300,000. Its notable objects include the famous Tabula Peuteringa, a Mexican MS., given by Cortez to Charles V, the unique MS. of the fifth decade of Livy, and the extensive series of Orientalia collected by Von Hammer. *The National Library at Pesth* has 185,000 volumes and 10,000 MSS. *The Royal Library of Brussels*, although reorganized in the present century, may be said to have been founded in the 14th century. The MS. Department (Bibliothèque de Bourgogne) contains 22,000 articles. Here is the Burgundian missal dating from 1485, which afterwards passed into the hands of Matthew Corvinus, King of Hungary, Charles the Bold's copy of the Cyropædia, and many other historical rarities. The French took some of the most valuable to Paris, whence they had to be returned when the fortune of war turned against them. The printed books number 234,000 volumes. The collection of engravings is said to contain a woodcut dated 1418, five years before the earliest example mentioned by British writers. *The Royal Library at Copenhagen* contains 550,000 volumes of printed books and 25,000 MSS., including many incunabula, and Scandinavian MSS. In the same city they preserve the books and works of art bequeathed by the great sculptor Thorwalsden. It is also his tomb. The *University* has a collection of 154,000 volumes of printed books and 4,000 MSS. The *Bibliothèque Nationale* at Paris has over 1,500,000 volumes. This under its varying names was for centuries the first library in the world. The *Bibliothèque du roi* and the *Vaticana* were the two literary wonders of Europe.† In 1373 the old Royal Library of France

* "Die offentlichen Bibliothecken der Schweiz im Jahre 1868 . ." Von Dr. Ernst Heitz. Basel, 1872. 4to.

† The first public library in France seems to have been founded by Saint Louis. He had been told of a Saracen sultan who sought out good books, had them copied, and placed in a library freely accessible to learned men. The King resolved to do

had 973 volumes, which by 1423 had *decreased* to 853; in 1544 it only numbered 1,890 volumes; in 1642 6,000 volumes; in 1661 16,746 volumes; by 1669 it had almost doubled; in 1714 it had 70,000; in 1790 152,000; in 1795 450,000 volumes; in 1860 it had 1,500,000 volumes. These figures do not always represent a normal growth; sometimes the library was enriched by the spoils of war and the ruin of provincial libraries. The National Library has always been remarkable for its immense number of vellum printed books, the most extensive anywhere in existence.* Paris is well provided with libraries, that of the Arsenal contains over 200,000 volumes; that of the Geneviève 188,000; that of the Hotel de Ville 70,000; the Mazarine Library has 132,000 volumes; the Sorbonne 80,000; the Jardin des Plantes 70,000. There are many others.

The Royal Library at Berlin has 600,000 volumes of printed books and 14,000 MSS. Amongst its notibilia are autographs of Luther and Melancthon, the Codex Wittekindi, said to date from the 8th century, Guttenberg's Bible, &c., &c. *The Royal and University Library of Breslau* contains 350,000 printed books and 2,300 MSS. *The Royal Library of Darmstadt* has 230,000 volumes, 4,000 MSS., and 60,000 dissertations. It was founded by the Landgrave Louis VI, in 1670. *The Royal Public Library at Dresden* was founded in 1555, and now has 305,000 printed books and 2,800 MSS. Amongst the curiosities are an Atlas Royal, of which only three copies are said to have been made; a Mexican codex; a beautiful copy of Petrarch, *de remediis utriusque fortunae*; Durers on human proportions, with the original drawings. *The Library of Gotha*, founded by Duke Ernest of Saxony about 1640, contains 150,000 volumes and 5,000 MSS. *The Library of the University of Göttingen* contains 360,000 printed books and 5,000 MSS. *The Library of the City of Homburg*, founded in 1529, contains 250,000 volumes of printed books and 5,000 MSS. *The Library of the University of Heidelberg* has 200,000 volumes. Its MSS. are variously stated at 1,800 and 3,000! *The Royal Library at Munich* is believed to have 600,000 volumes. The collection of incunabula extends to 12,000 volumes. Amongst its curiosities are a Greek Testament and Latin Gospels, dating from the 8th century. Autographs of Luther are shown. The Munich MSS. are very extensive. The Latin codices are nearly 11,000 in number, the Arabic MSS. are nearly a thousand, the Persian 350, the German MSS. over 5,000, whilst those in the other modern languages of Europe are over 13,000. *The Library of the University of Munich* is said to contain 220,000 printed books and 2,000 MSS. *The present Library of the University of Strasburg* has had an unparalleled

likewise, and had copies of portions of the Bible, of Saint Augustine, &c., and placed them in his chapel in Paris, where he studied them himself in his leisure, and willingly allowed others to do the same. He was better pleased to pay for the transcription of new copies than to buy old ones, for thus he increased the number of copies.

* See the "Précis de l'Histoire de la Bibliothèque adjourd'hui Bibliothèque Nationale." Par Alfred Franklin. 2me ed. Paris, 1875.

growth. The old library—the joint property of the town and the Protestant Academy, that had previously been a university—was utterly destroyed in the bombardment of the town by the Germans. In this conflagration perished hundreds of thousands of books and MSS. Amongst the latter was a beautiful Hortus Deliciarum of Herrard, Abbess of Landsperg, some unique Greek mathematical works, and many Latin and German MSS. These it was useless to think of replacing, but the Germans went to work with such good will to found another library, that four years have sufficed to bring together the astonishing number of 350,000 volumes.* *The Royal Public Library at Stuttgart* is little more than a century old. The number of printed books is 245,000, and of MSS. 3,230. There is a fine collection of bibles in various languages, and extending to many thousand volumes. *The Library of the University of Tubingen*, founded in 1562, is stated to have 200,000 volumes of printed books, 2,000 MSS., and 50,000 dissertations. *The Ducal Library of Wolfenbüttel*, of which Lessing was once librarian, has 200,000 printed volumes and 6,000 MSS. There are various relics of Luther preserved here.

The Library of the Vatican was at one time considered to be the largest in the world. It is now believed to contain 100,000 printed books and 24,000 MSS. Of the MSS., 3,450 are Greek, 2,000 Oriental, and the remainder chiefly Latin. Its valuable MSS. will ever claim for the Vatican a place in the first rank of the great libraries of the world. The *Codex Vaticanus*, the Virgil of the 4th or 5th century, is amongst its relics. Still more interesting, from the circumstances of its recovery, is the palimpsest MS. of Cicero de Republicâ, a work which had disappeared from literature entirely, when the sagacious eye of Mai read some portions of it beneath a commentary of the Psalms. The pagan had been forced to make room for St. Augustine.† The library has never been thoroughly examined or catalogued, and has been stigmatized as a tomb. A thorough sifting of its treasures would be a gain to literature. The *Biblioteca Casanata at Rome*, is said to contain 120,000 printed books, and 4,500 MSS. At *Naples*, in connection with the Museo Nazionale (better known by its old name of the *Museo Reale Borbonico*), rich with the spoil of Herculaneum and Pompeii, there is a library of 200,000 volumes and 4,000 MSS., some of them Greek. Readers in English libraries, who not infrequently use tens, and sometimes hundreds of books at a sitting, will be amused to learn that the maximum allowance at Naples is three. The *Magliabecchiana*, at Florence, is said to contain 175,000 volumes and 12,000 MSS. Its founder

* "Die Kaiserliche Universitäts und Laudesbibliothek in Strassburg." Von C. G. Hottinger. 2e Auf. 1875.

"The Strassburg Library." [By Wm. E. A. Axon.] London, 1872.

† Dr. Dee, when pleading for the preservation of ancient writers and monuments, in his supplication to Queen Mary, refers to the many books that perished at the dissolution of religious houses, "as at Canterbury did that wonderful work of the sage and eloquent Cicero de Republica, and in many other places the like." This is the latest notice we have seen of the existence of the book.

was the purest type of the bookworm the world has ever seen. His love of literature made him overcome the disadvantages of poverty and ignorance. As librarian to the Grand Duke, he was looked upon as a literary oracle, for his entire life was given up to reading, and he seemed to remember all that he had read. He appears to have been an Italian Dominie Sampson, eccentric in his ways, but always willing to help literary men, although he wrote nothing himself.

The Imperial Library of St. Petersburgh is now one of the richest in Europe. Its foundation was due to the confiscation of the celebrated Zaluski library at the fall of Warsaw in 1794. The collection is now estimated to contain 800,000 printed volumes and 20,000 volumes of MSS. These include many important State papers sold from the archives by the revolutionary mob of Paris. One of its treasures is a copy of the Gospels in letters of gold upon purple vellum, believed to be the work of the Empress Theodosia. There are many historical MSS. of interest to the English student, chief amongst them being many autographs of Mary Queen of Scots. It is also rich in ancient Hebrew MSS. The *Library of the University of Warsaw* is said to contain 150,000 volumes, and has been enriched from the monasteries. It has a collection of works printed by the Elzevirs, second only to that in the Imperial Library.

The *Biblioteca Nacional* at Madrid has 200,000 volumes of printed books and 2,800 MSS. This is the only library of the first rank as to size in Spain. We may contrast with this fact the statement, that in the 12th century the kingdom of Granada had 70 libraries, and that of the Khalif's contained 600,000 volumes. *The Library of the Escurial* contained at the beginning of the century 30,000 printed books and 4,300 MSS. They were removed to Madrid by Joseph Bonaparte. They were shamelessly plundered before they regained their ancient home. There is an extensive collection of Arabic MSS., of which a catalogue was published by Casiri in 1760–70. *La Columbina at Seville* is a small but interesting library, given to the chapter by the son of the great Admiral, and containing MSS. and books annotated by the hand of Columbus. The chapter in past times have grossly neglected their trust.

The *British Museum* was founded by an Act of Parliament passed in 1753, "for the purchase of the museum or collection of Sir Hans Sloane, and of the Harleian collection of MSS., and for providing one general repository," in which they should be accessible to the public. The Cottonian collection was made by Sir Robert Cotton, the friend of Camden, and of many of the other literary men of his own day. It is not a little curious that the books of Cotton, who early in his public life sought to induce Elizabeth to found a national library, should have served as the nucleus of the British Museum. The library, which in the hands of its collector rendered signal services to learning, was given to the nation by his descendant, Sir John

Cotton, in 1700. Sir Hans Sloane had inherited from William Courten a fine collection of objects of natural history and general science, which in the course of his own scientific investigations he had largely increased. This museum (the catalogue extending to 38 volumes in folio, and 8 in quarto), was by his will offered to Parliament for the sum of 20,000*l.*, "it not being, as I apprehend or believe, a fourth of their real and intrinsic value." The money for its purchase, and also for securing the Harleian MSS., was raised by a lottery, fraudulently managed by an unscrupulous Commissioner! Since then, it has received many noble additions by the liberality of private benefactors, so that it may now in extent and value probably be regarded as occupying the first place. The library increases at 30,000 volumes yearly, a rate of progression without parallel. The first important addition to the British Museum library was the gift by George II of the old Royal Library. George III was also a donor, the library owing to him the remarkable series of pamphlets collected by George Thomason, the bookseller, between 1640 and 1660. These form a photograph of England during the civil war. In 1823 it received from George IV the library which his father had collected, and valued at 200,000*l.* The secret history of this transaction shows that not much gratitude is due for this apparently royal munificence. The library is one of the finest ever made by a single individual. The suppression of the Jesuit orders enabled the librarian to obtain cheaply many rare and valuable books. The collection is rich in early printed books. Next to this, the most important addition the Museum has received was the bequest by Mr. Grenville of his collection of books, purchased out of a sinecure pension. It consists of 20,242 volumes. The Chinese Library of Morrison, Garrick's Plays, Burney and Hawkins' Musical Collections, Bentley's Classics, and many more important libraries, have, either by gift or purchase, been added to it. It would be impossible to enumerate even the names of the important libraries it has absorbed, much less to name its chief treasures. The gem of the old Royal Library is the "Codex Alexandrinus," a biblical MS., in ancient Greek, written in the 5th century. Perhaps of all the glories of the Cottonian collection, the most invaluable is that wonderful relic of Anglo-Saxon art, the Durham book, written about A.D. 800, and most elaborately illuminated*

The British Museum is in most respects managed with creditable liberality and attention to the wants of readers. The famous circular reading-room, designed by Sir A. Panizzi, and capable of affording plenty of space for 300 readers to be at work at the same time, is probably the largest and handsomest reading-room ever constructed. The MS. catalogue of printed books fill nearly 2,000 volumes.

* The new classed catalogue of MSS. fills over 100 volumes folio. A description of its more salient features is given by Mr. W. de G. Birch in the "Transactions of the Royal Society of Literature," N.S., xi, 132.

The *Bodleian Library, Oxford*, owes its foundation to the public spirit of Sir Thomas Bodley, who in 1597, undertook to restore the library of the University, which then lay ruined and waste. He commenced by the gift of a collection of books made on the Continent, and valued at £10,000. He interested many great persons in the work. Indeed, such a noble example could hardly fail to find many imitators. Laud, Dodsworth, Fairfax, and Selden, were amongst its early benefactors; whilst, in more recent times, the bequests of Gough, Malone, Douce, &c., have added to its value. The story of the library has been admirably told by Mr. Macray.* The *Library of the University of Cambridge* contains about 250,000 volumes, of which over 3,000 are MSS. The University received donations of books as early as 1437. Here is shown the famous "Codex Bezae," dating from the end of the 5th, or commencement of the 6th century. The *Advocates' Library at Edinburgh*, intended at first as a law library, has gradually expanded, until it has become, in a measure, the national library of Scotland. Amongst its treasures are the Wodrow MSS., the original of the Solemn League and Covenant, &c. Not the least curious part of the library is a series of 100,000 academical dissertations. The bequests of Richard Gough, Malone, and Douce, may be named. It is rich in Oriental and Biblical MSS. The *Library of Trinity College, Dublin*, owes its origin to the defeat of the Spaniards at the battle of Kinsale, in 1603; for the soldiers, in order to commemorate the victory, subscribed 1,800*l.* for the foundation of a public library. It afterwards received the library of Archbishop Usher.

England is not so rich as some of the continental states in public libraries of old date, but it may claim no mean place amongst the nations in the provision of collections of books for popular use. None of our institutions—literary, religious, or educational—are considered complete until they possess a library. The subscription libraries, from small beginnings little more than a century ago, have developed into gigantic proportions, and are the means of disseminating a vast quantity of new literature throughout the country. It is to be regretted similar methods for the loan of older literature are not common. The British Museum is simply a consulting library. With the facilities now existing for the transport of books from place to place a National Lending Library should be a possibility. The benefits of the Museum are largely confined to the students of the Metropolis. There are numerous duplicates in the collection which might be fairly available for such a purpose.

The municipal authorities are moving in the matter of libraries. The powers entrusted to them by the Public Libraries Act have been put in motion with distinguished success in some of the larger towns.

* "Annals of the Bodleian Library, Oxford, A.D. 1598–1867." By the Rev. William Dunn Macray, M.A. 1868.

VI. Libraries of America.

In the compilation of the census of the United States in 1870, an attempt was made to learn the number and extent of the libraries possessed by the American people. The results are thus stated :—

	Libraries.	Vols.
Congressional	1	190,000
Departmental	14	115 185
State and Territorial	53	653,915
Town and City, &c.	1,101	1,237,430
Court and Law	1,073	425,782
School, College, &c.	14,375	3,598,537
Sabbath School	33,580	8,346,153
Church	4,478	1,634,915
Historical, Literary, and Scientific Societies	47	590,002
Charitable and Penal Institutions	9	13,890
Benevolent and Secret Associations	43	114,581
Circulating	1,241	2,536,128
	56,015	19,456,518

The private libraries were stated at 108,800, possessing 26,072,420 volumes.

If in America we meet with no collection capable of rivalling the libraries of the first class in Europe, it is yet evident that a class of libraries is being created that must have an important influence upon the national life. These libraries, sometimes proprietary, sometimes municipal are instinct with the spirit of the age. They diffuse amongst wide circles the latest results of modern science and culture.

The Library of Congress, Washington, is the national library, and is growing at a rapid pace. In 1870 (the census year) it had 190,000 vols. At the end of 1874 it possessed 274,157 volumes, and about 53,000 pamphlets. The increase during the year was 15,405 vols., 6,840 books and 3,218 pamphlets came to it by virtue of the copyright law. The progress of the library has outgrown its accommodation, and we are told in the last report that "over fifty thousand volumes are already piled upon the floors, without space for shelving or arrangement." *The Astor Library, New York*, was founded by the well known merchant of that name, whose wealth has past into proverb. He left the sum of 400,000 dollars for the foundation of the library. His son, Mr. W. B. Astor, who inherited the bulk of his immence fortune, has also been a munificent friend of the library. The library now contains 150,306 volumes. The increase in 1874 amounted to 2,666 volumes, of which no less than 1,938 volumes *were presented*. The collection owes much to the bibliographical attainments of its first librarian Dr. Cogswell. *The Public Library of the City of Boston*, is perhaps to Europeans the best known and most interesting of all the American libraries. It now consists of a Central Library and seven branches, having in the aggregate 276,922 volumes. The funds devoted to it by the City Council have been liberally supplemented by gifts from private citizens. Theodore Parker

bequeathed to it his own fine library, and from George Ticknor it received his collection of Spanish and Portuguese books. The library appears to be managed in the most generous and catholic spirit. The catalogues are remarkable for their bibliographical accuracy, and for the pains taken to direct the reader's attention to systematic study.*

VII. Libraries in China and Japan.

The great Imperial Library was founded by Kien-lung in the last century. In response to an imperial edict many of the literati and book-lovers placed rare editions at the service of the Government, to be copied. The Imperial Library has many of its books, therefore, in MS. Chinese printing, however, is only an imperfect copy of the caligraphy of good scribes. Four copies were made of each work. One was destined for the Wan Yuen Repository, at Peking; a second for the Wan-tsung Repository at Kang-ning, the capital of Kiang-su province; a third for the Wan-hwui Repository at Yang-chou-fu, and the fourth for the Wan-lau Repository at Hong-Chou, the capital of Cheh-Kiang. A catalogue was published from which it appears that the library contained from ten to twelve thousand distinct works, occupying 168,000 volumes. The catalogue is in effect an annotated list of Chinese literature, and includes the works which were still wanting to the library and deemed essential to its completeness. Dr. D. J. Macgowan, who visited the Hong-Chou collection, says that it was really intended for a public library, and that those who applied for permission to the local authorities not only were allowed access, but were afforded facilities for obtaining food and lodging, "but from some cause or other the library is rarely or never consulted.†

This does not appear to arise from any distaste for reading, on the contrary the Chinese were a literary people when Europe was in darkness. They tell of Wang-chong who lived under the Han dynasty, that when young he was too poor to buy books and used to stand and read the books exposed by the booksellers in the market, and in this way acquired much of the knowledge for which he became famous. Whilst he was thus pursuing knowledge under difficulties, there were probably thousands of dust-covered volumes lying untouched in locked-up public libraries.

Beside the Imperial, there are Provincial, Departmental, and District Libraries. Thus the examination hall of every town will contain the standard classical and historical books. At Canton, and other cities there are extensive collections but their use is restricted to the mandarins.

There are collections of books and sometimes printing presses in connection with the Buddhist monasteries. M. Huc saw one at Poutou, which contained 8,000 volumes, covered with yellow satin,

* For particulars as to the development of the Free Library system in Great Britain, see the "Companion to the Almanac" for 1869.

† "Journal of North China Branch of Royal Asiatic Society," May, 1859, p. 174.

and duly inscribed and arranged. They were almost entirely Buddhist theology, some of them as is well known, being simply transcriptions of Sanscrit and Pali words in Chinese characters, which could readily be recited by priests utterly destitute of any knowledge of those sacred tongues. The missionary hinted that this kind of literature could not be very edifying, and in reply learned that they now read neither books they could understand, nor those they could not. The Bonze who made this complaint was himself a striking exception, having spent years of study in which he had scarcely ever quitted the library. He was an enthusiastic librarian and had penetrated between the covers of many of the tomes committed to his care (pp. 101—2).

Lin-tsze-Lian, a Chinese Mohammedan, who is accounted the apostle of that faith, speaks of the course of his studies thus :— "For eight years I read all the Confucian books, for six years after I read Mohammedan books, then for three years Buddhist books, and then for a year Daos books. Besides that, I read 137 books of Europeans. I travelled in China and visited libraries, seeking out our books, and suffered much from my relatives for my exclusive and, as they considered, fruitless occupation."*

Of the extent to which libraries are available for the public use, we may judge by what Sir John Bowring has told us of the collection at Ning-po. The venerable reformer when speaking at the opening of the building for a free public library and museum, presented by the late Sir William Brown to the town of Liverpool, said :—"Now, I will tell you what happened to me when I visited one of the noblest public libraries in China, in the city of Ning-po—a library which glories in having received a succession of imperial wits, and it is supposed to contain one of the best collections of literature out of the capital of Pekin. I was exceedingly anxious to get admission. I was told that there were three families in the town, each of which had got a key, and I found it necessary to consult them all before the doors could be opened : and, minister though I was, I was glad to be able by the exercise of the little power which I possessed, to get the representatives of these three illustrious families to lend me the keys. I entered the library : there were hundreds of thousands of volumes, but there was not a single reader, and it was not in the memory of men that a single book had been allowed to depart from the rooms."†

It is, however, scarcely fair to call this a public library. It was the property of the family of the Fans, who bought the library which formed its basis from the Yung family when they fell into decay. When the Imperial Library was being formed they sent to the capital no less than 696 volumes not possessed by the literary monarch. Three other families distinguished themselves in this way by very large loans of books, and all

* "Athenæum," March 20, 1875, p. 393.

† "Ceremonies connected with the Opening of the Building for a Free Public Library and Museum." Liverpool, 1861, p. 26.

received a copy of the *Kú Kin Tu Shú Tsih Ching*,* as a reward.

The catalogue of the Fan library has been published; it contains 4,094 works in 53,799 volumes. On Sir J. Bowring's visit they exhibited some engravings, which were said to be masterpieces of Chinese art. They were, however, executed in France, and presented by Louis XVI to Kien-lung, to illustrate the campaign against the Calmucks in 1756. The library of the Loo family at Ningpoo is guarded with the same jealousy as that of the Fans.

Books are very cheap in China, and the literary element in their civilisation is visible in the excerpts from the classics which decorate almost every wall. Even common pottery is beautified by the verses of their great writers.

They have circulating libraries in the Middle Kingdom. Books, chiefly of light literature, are lent out from the shops, the charge being about one copper cash per day for each volume. Such books are also carried about for hire by hawkers. Japan also has libraries, but very little is known of them in Europe. Some will be attached to the Buddhists convents. There is a national library, and lately the establishment has been reported of a public library at Yeddo, absolutely free to foreigners as well as natives.

VIII.

In this rapid survey we have seen almost every variety of those instruments of human culture to which this article is devoted. We have stood again in the royal library of Asshurbani-pal, and read the clay-books that for centuries have been hidden from the sight of man; we have seen the real glories of the Alexandrian library; seen the guests of Lucullus availing themselves of the literary treasures of their hosts. Then, in the middle ages, we have watched the scribes in the convents—islands of peace amidst a sea of turbulence—keeping alive the sacred flame of culture, and handing down to us the great masters of Greece and Rome. In the modern time, when printing has facilitated the formation of libraries, we have seen them, sometimes the creation of kings, sometimes of students, sometimes the property of nations, but ever with an increasing tendency towards publicity; and lastly, we have seen the creation of libraries absolutely free, devoted not only to the use of the scholar in his toilsome researches, but to the creation and gratification of a taste for reading that will bring round the scholar a wider audience, and enable him to wield a greater power for good. In this, at least, we may regard with unmixed satisfaction the tendencies of the age. The noble library at

* This has been styled a library in itself. It is, as its title implies, a complete collection of ancient and modern books. It was finished towards the close of the reign of Kanghi, to whom we owe the "Imperial Dictionary." It was printed with movable copper types. It extends to 10,000 *Kiuen*, but is usually bound in *only* 5,000 volumes, exclusive of 108 volumes of indices. It is said that the fount of type was melted after thirty copies of the collection had been worked off.

Ningpo, covered with the dust of generations, and jealously guarded against the advent of readers, is the *reductio ad absurdum* of the old exclusive spirit that would bound knowledge with a fence, and make the pleasures of literature the heritage of a few, instead of being the delight of all. Of the new spirit, we may take the Boston City Library, and its similars, as the noblest symbols. To the scholar, the library offers costly volumes that only princely wealth could purchase; to the youth, it offers the knowledge which will enable him to become an intelligent citizen and a useful member of society; to the toilworn and the sad-hearted, it offers amusement and consolation; to the mechanic, it may give a hint that in after years will ripen into an invention of benefit to the world; to the pampered daughter of fortune some thought that shall give a noble purpose to her life; to her poorer sister, toiling for bare existence in a garret dim, a word that shall save her from despair. To every class it offers a blessing—"without money and without price."

WILLIAM E. A. AXON.

NOTE.

Those who wish to pursue this subject will do well to consult (besides the references already given) the following works:—

"Memoirs of Libraries: including a Hand-Book of Library Economy." By Edward Edwards. London: Trübner. 1859. 8vo. 2 vols.

"Libraries and Founders of Libraries." By Edward Edwards. London: Trübner. 1864.

"Free Town Libraries, their Formation, Management, and History in Britain, France, Germany, and America, together with brief notices of Book Collectors, and of the place of deposit of their surviving Collections." By Edward Edwards. London: Trübner. 1869.

"The Lives of the Founders of the British Museum: with Notices of its Chief Augmentors and other Benefactors. 1570—1870." By Edward Edwards. London. 1870.

"A List of the Principal Libraries in Europe and the United States of America." Compiled from various sources. [By John Hungerford Pollen, M.A.] South Kensington. 1866.

The article "Libraries" in the English Cyclopædia. This was written by the late Thomas Watts, and is the most philosophical and satisfactory essay on the subject that has yet appeared.

PRIMARY EDUCATION IN ENGLAND AND WALES.

Amid the widest diversity of views as to the system on which the education of the people of England should be conducted, we find scarcely any difference of opinion as to the necessity for popular education in some form or other. This is in itself a fact worthy of consideration. There was a time, and that too within the memory of persons still living, when education was regarded as the rightful heritage and the legitimate privilege of the few, and when ignorance more or less deep was considered the proper condition for the many, a time when schools, as we now understand the term, were altogether unknown among the industrious classes who depended for the teaching of their children upon the old "dames," whose seminaries are even now not altogether extinct, or upon the voluntary efforts of the promoters of the Sunday Schools which paved the way for the day schools now existing on all sides. At the beginning of the present century national education was in fact a thing almost entirely unknown, and it was as Malthus truly said in his "Essay on Population," "A great national disgrace that the education of the lower classes of the people in England should be left merely to a few Sunday Schools supported by a subscription from individuals." That this was actually a true description of the condition of affairs can unhappily be proved only too clearly by a reference to well established facts and, with the exception of the establishment of a few schools by the Society for Promoting Christian Knowledge, it was not until the year 1808, when the British and Foreign School Society was set on foot that any definite attempt was made to remedy the evil. At that period the Society, with which the name of Earl Russell is now so inseparably identified, commenced its labours, and three years later, in 1811, the members of the Established Church, headed by Bishop Van Mildert, Mr. Joshua Watson and others, founded the National Society for the promotion of the education of the poor in the principles of the Established Church. These two great organisations at once served as rallying points for the friends of education and in a short time the results of their beneficent operations were seen not only in the considerable increase in the number of schools and scholars but in the improved character of the education provided.

So far the work had been mainly performed by voluntary and personal effort, but just as the association had taken up the work formerly done by individuals, so in time the nation was roused to a sense of its responsibilties and came forward to supplement the efforts of the associations, while in our own day it almost appears to be the desire of the country to assume the entire responsibility of the education of the people. The progress was, however, very gradual, and the conversion of the senate to the recognition of its duty in this respect was a far more difficult

task than might at first sight have been supposed. In 1807 Mr. Whitbread brought the subject before the House of Commons, when he advocated the establishment of parish schools in which the children of the labouring classes should receive two years' education between the ages of seven and fourteen, but this proposal, humble as it was, and utterly insufficient as it now seems to be in the face of revised codes and school-board compulsion, proved too much for the temper of the House, and it was rejected with but scant consideration, partly on economical grounds, and partly on the plea that such over-education of the labouring classes would tend to make them dissatisfied with their position and their duties. But while Mr. Whitbread failed for the moment "the candle was lighted in England" and was destined "never to be put out." The two societies which became clearly identified with nonconformity (or, as it is sometimes termed, unsectarianism) and churchmanship, gained ground every day, and by the aid of monitors, schools were opened in a large number of districts, until in 1818 the movement had gathered sufficient strength to induce Mr. Brougham to press for the appointment of a committee, which was granted, to enquire into the whole question. The method adopted by this Committee, in order to arrive at some idea as to the extent to which the education of the poor was then being carried forward was to send out a circular to the incumbent of every parish in Great Britain, asking a series of questions as to the number of schools endowed and unendowed and of scholars both in day and Sunday schools. The answers to this application were given far more generally than might have been anticipated, and when the figures were tabulated it was found that the following was the result :—

Day Schools.	Scholars.	Proportion of Scholars to Population.	Sunday Schools.	Scholars.	Proportion of Scholars to Population.
19,230	674,283	One in 17·25	5,463	477,225	One in 24·40

The proportion of children estimated to be under instruction at this date was thus shown to be only one in seventeen.

In 1828, Mr. Brougham made another similar effort, with the view of testing the progress which had been made in the ten years, and the result was in every way satisfactory considering the limited means at the disposal of the workers, but so great was the increase of interest in the matter that only five years elapsed before the Government instituted yet another enquiry. From the returns then obtained, it was deduced that in the fifteen years from 1818 to 1833 the number of scholars had more than doubled, while the "Infant Schools," which had been for some years in working order in Scotland, had also been introduced in the south with the best results.

The following table shows the results arrived at by Lord Kerry, whose name has ever since been permanently associated with this enquiry:—

Day Schools.	Scholars.	Proportion of Scholars to Population.	Sunday Schools.	Scholars.	Proportion of Scholars to Population.
38,971	1,276,947	One in 11·27	16,828	1,548,890	One in 9·28

This table, when published some years afterwards in connection with the census returns of 1851, was commented upon by Mr. Horace Mann, who expressed an opinion that the figures given were decidedly within the mark, and that the proportion of scholars to population was not less than ten per cent. It must of course be borne in mind that a very considerable proportion of the Sunday scholars must be estimated as already returned among the day scholars. It will perhaps be interesting to add to the above the following statement of the number of children who in 1833 were receiving an education which was wholly or partly gratuitous:—

Scholars taught by endowment	153,764
Scholars taught by subscription	178,517
Scholars taught by subscription and personal payment ..	212,217

Giving a total of 544,498 children under instruction in schools which were supported to a greater or less extent by voluntary offerings. It was in that memorable year, 1833, an epoch in the history of English National Education, and, be it remembered, in the first session of the Reformed Parliament, that the subject was once more brought before the House and with a result which showed at a glance how material had been the change in the public sentiment since the day of Mr. Whitbread's speech, for the House decided to vote 20,000*l.*, which was to be applied to the erection of schools for the education of the children of the poorer classes in connection either with the National Society, or the British and Foreign School Society, and the payment of which was to depend on the reports of the Societies' Committees.

From that date the progress under the roof of St. Stephen's towards the acceptance of the principle that the education of the poor is a national duty, was as noticeable as the growth of the efforts outside the walls of Parliament to discharge the responsibility. The societies with larger funds at their disposal and with the immense relief afforded by the Government building grants worked with renewed vigour, and after the 20,000*l.* had been annually voted up to 1838, it was increased in 1839 to 30,000*l.*, and in that year a Committee of Privy Councillors was formed to devote special attention to the whole question, and to administer the funds voted by Parliament. In 1842 the grant at the disposal of the Committee was raised to 40,000*l.*, at which it

stood until 1845, when it was increased to 75,000*l.*, and has steadily advanced ever since, the amounts rising as follows :—

1846—1850 ..	£115,000	1859	£836,920	1868	781,324
1851	150,000	1860	798,167	1869	840,711
1852	160,000	1861	803,794	1870	914,721
1853	260,000	1862	842,119	1871	1,458,402
1854	263,000	1863	804,002	1872	1,551,560
1855	396,921	1864	705,404	1873	1,299,803
1856	451,213	1865	695,078	1874	1,356,852
1857	541,233	1866	694,530	1875	1,548,563
1858	663,435	1867	£705,865		

But this course was not taken by the successive governments of the country without encountering a very strong opposition both in the Lower and the Upper House. At times the opponents of progress were content simply to raise a protest, but on other occasions they met the proposals of ministers with a direct negation of the whole principle on which the education vote had been granted, as for instance on that memorable night, the 18th of April, 1847, when Mr. Macaulay made his famous speech on education, in defence of Lord John Russell's proposal to increase the vote to 100,000*l.* The opposition was led by Mr. Thomas Duncombe, member for Finsbury, who proposed that a select committee should be appointed to enquire into the justice and expediency of continuing the operations of the Committee of Council, and it was in reply to this gentleman that Macaulay rose. His speech was in effect a grand demonstration of the national duty in regard to the education of the poor, a question on which the country had, as he said, "during several weeks been writing, reading, hearing, thinking, petitioning," and on which he affirmed it to be the duty of Parliament to come to a decision. With his usual felicity and logical power the great orator addressed himself to the subject which was causing so much excitement :—"I believe Sir," he said, "that it is the right and the duty of the State to provide means of education for the common people. This proposition seems to me implied in every definition that has yet been given of the functions of a Government. About the extent of those functions there has been much difference of opinion among ingenious men. There are some who hold that it is the business of a Government to meddle with every part of the system of human life, to regulate trade by bounties and prohibitions, to regulate expenditure by sumptuary laws, to regulate literature by a censorship, to regulate religion by an inquisition. Others go to the opposite extreme and assign to Government a very narrow sphere of action. But the very narrowest sphere that ever was assigned to Government by any school of political philosophy is quite wide enough for my purpose. On one point all the disputants are agreed. They unanimously acknowledge that it is the duty of every Government to take order for giving security to the persons and property of the members of the community. This being admitted, can it be denied that the education of the common people is a most effectual means of securing our persons and our property." And then he proceeds to quote Adam Smith's declaration that if "you leave

the multitude uninstructed there is serious risk that religious animosities may produce the most dreadful disorders," a result which he shows to have been the case in the "no popery" riots of 1780, of which he gives the following graphic description: "Without the shadow of a grievance, at the summons of a madman, a hundred thousand people rise in insurrection. During a whole week there is anarchy in the greatest and wealthiest of European cities. The Parliament is besieged. Your predecessor (the Speaker) sits trembling in his chair and expects every moment to see the door beaten in by the ruffians whose roar he hears all round the house. The peers are pulled out of their coaches. The bishops in their lawn are forced to fly over the tiles. The chapels of foreign ambassadors made sacred by the law of nations are destroyed. The house of the Chief Justice is demolished. The little children of the Prime Minister taken out of their beds are laid in their night clothes on the table of the Horse Guards, the only safe asylum from the fury of the rabble. The prisons are opened. Highwaymen, housebreakers, murderers come forth to swell the mob by which they have been set free. Thirty-six fires are blazing at once in London. Then comes the retribution. Count up all the wretches who where shot, who were hanged, who were crushed, who drank themselves to death at the rivers of gin which ran down Holborn Hill; and you will find that battles have been lost and won with a smaller sacrifice of life. And what was the cause of this calamity, a calamity which in the history of London ranks with the great plague and the great fire? The cause was the ignorance of a population which had been suffered in the neighbourhood of palaces, theatres, temples, to grow up as rude and stupid as any tribe of tattooed cannibals in New Zealand, I might say as any drove of beasts in Smithfield Market."

That this remarkable speech tended, in no small degree, to support the Government proposal can scarcely be questioned, although, in common with other political sins, it cost Mr. Macaulay his seat at the general election, which took place three months later on. The opposition to the scheme was, however, unquestionably strong, including the majority of the nonconformist Members of the House, headed by Mr. John Bright, who stood forward as the advocate of the voluntary system, and who did battle with Mr. Macaulay, and Mr. Roebuck, then Member for Bath, who opposed the scheme on the ground that it would induce religious animosity, and who was, like Mr. Macaulay, unseated on the occasion of the subsequent appeal to the country. But the opposition, strong as it was, could not stem the tide which was turning strongly in favour of the encouragement and assistance of the voluntary efforts that had so long been made, and which had only of late years received any great assistance from the State. That assistance, it must be remembered, was still to be given, practically, on the same principle as in 1839, when the Privy Council Committee was formed, under Lord Melbourne's Ministry, and Mr. Bright's

assertion that Lord John Russell was endeavouring to aggrandise the Church possessed, therefore, but little weight. The resolution of that Committee on the 3rd of December, 1839, stated that it would only give assistance to schools "in which competent provision would be made for the instruction of the children in the schools, the daily reading of a portion of the Scriptures forming part of such instruction," and it was further required that the schools connected with the Church of England should be submitted to an examination in religious instruction, by inspectors appointed by the Privy Council Committee, in conjunction with the Archbishops. With regard to other schools, it was decided to make no enquiry as to the religious instruction given in them, but simply to require them to submit to inspection in secular knowledge. These terms were agreed to by the nonconformists in 1839, but, in 1847, a very strong feeling had been raised against them. This feeling, Lord John Russell, in his remarks at the opening of the great education debate during which Mr. Macaulay made the speech already referred to, professed himself unable to understand. His Lordship, although personally and as a member of the British and Foreign School Society in favour of the simple requirement of daily Bible reading, and of a separate time for religious instruction to the children of the various persuasions, declared his conviction that any attempt to enforce such a system would have been a fatal mistake, especially as he held that the Government plan was in full accord with the principles of religious liberty, and was one with which the conscience of the dissenter from the Church of England ought to be fully satisfied. It was, he carefully pointed out, "not a system of State education, but a system which merely came in aid of voluntary efforts in behalf of education. It was merely intended to aid existing schools, without imposing any terms upon any schools which were not in perfect conformity with the rules and regulations which the founders and managers of those schools had already established." In other words, as the state had previously aided in the erection of school buildings, so it now proposed to afford adequate assistance towards the support of monitors and pupil teachers. The result of the agitation which shook the country from end to end was that the proposal of Lord Russell was carried, and the grant of 100,000*l.* was agreed to; the resolution of Sir Willian Clay that children whose parents objected to the religion taught should be allowed to share in the secular instruction given in the schools being negatived by 210 to 74, and the proposal of Sir W. Molesworth to enable Roman Catholics to participate in the grant being rejected by 203 to 22. Thus, after the most complete national consideration of the whole question, the grant in aid system was extended, while, at the same time, in answer to repeated questions after the grant had been voted, it was distinctly stated by the Government that it was intended to apply the public money on the widest possible bases, and that, in cases where objections to inspection in religious knowledge were felt on

religious grounds, by any particular denomination, the Committee of Council would be prepared to give them every consideration. The only other important change introduced by Lord John Russell and Lord Lansdowne was in the introduction of the system of certificated masters and of pupil teachers.

The year 1851, with its census-taking, brought with it an opportunity of gathering together some reliable statistics as to the number of children under instruction in the country, and, although the information on this head was given voluntarily, and was not, like the ordinary particulars as to age, place of birth, etc., required compulsorily from the heads of houses, it may be regarded as generally reliable. The following table conveys the results of the enquiry :—

	Day Schools.			Sunday Schools.	Evening Schools.
	Public.	Private.	Total.		
Schools	15,518	30,524	46,042	23,514	1,545
Scholars	1,422,982	721,396	2,144,378	2,407,642	39,783

If to this table be added another table, giving the figures already quoted as obtained in 1818 and 1833, we shall be enabled to see at a glance the immense progress which had been made during that period :—

Date.	Day Schools.	Scholars.	Proportion of Scholars to Population.	Sunday Schools.	Scholars.	Proportion of Scholars to Population.
			One in			One in
1818 ..	19,230	674,883	17·25	5,463	477,225	24·40
1833 ..	38,971	1,276,947	11·27	16,828	1,548,890	9·28
1851 ..	46,040	2,144,378	8·36	23,514	2,407,642	7·45

Among the other tables furnished in the educational census of 1851, were certain statements of the proportion in which the various religious bodies contributed to the education of the people, and from these Mr. Mann estimated that, at that period, the Established Church educated 78 per cent. of the children, the British and Foreign School Society (undenominational) 7 per cent., the Independents 4 per cent., the Wesleyans 3½ per cent., and the Roman Catholics 3½ per cent.

The next important change, or rather development of the system on which the Government grant was dispensed, was made in 1853, when the capitation grant was established for 176 attendances in every school, and with these variations, on Lord Russell's original scheme, the educational work of the country was carried forward, with ever-increasing energy and rapidity, until 1858, and then an effort was made to take stock, as it were, of

the progress made since the last review of the subject. In that year, a Commission was appointed "to enquire into the present state of popular education in England, and to consider and report what measures, if any, are required for the extension of sound and cheap elementary instruction to all classes of the people." The Commissioners were the Duke of Newcastle, Sir J. T. Coleridge, the Rev. W. C. Lake, the Rev. W. Rogers, Professor Goldwin Smith, Mr. Nassau Senior, and Mr. Edward Miall. After three years' work, in which the Assistant Commissioners were actively employed collecting information from the various divisions of the country allotted to them, the Commissioners presented their report to Parliament, and it supplied, perhaps, the most valuable mass of information on the subject which has ever been accumulated, not only in the way of statistics, but in the form of reports by eye-witnesses of the highest capacity. One important fact brought out in the report was, that the number of children attending the day schools of the various religious denominations amounted to 1,550,000, of whom 76·2 per cent. were in Church of England Schools. The conclusions arrived at by the Commissioners, as to the general results of the system of national education then in force, may be summed up conveniently in the words of Mr. Walpole, when he said that its advantages were, according to their report, four in number:—first, that the existing system was the only system by means of which a religious education could be carried on; secondly, that, as by the leading principle of the system the voluntary exertions of individuals in the cause of education had been completely enlisted, they would be loth to do anything to disturb it; thirdly, that the general efficiency of the discipline, habits, and order of the schools was complete; and, fourthly, that the introduction of the pupil teacher system was completely successful. Such, in the opinion of the Commissioners, were the advantages of the system which had grown up so quietly from the year 1833, and which had led to the by no means insignificant result that, whereas in that year the proportion of the population in school was only one in twelve, in 1846 it had risen to nearly one in nine, while, in 1861, it had again increased to about one in seven. At the same time, the Commissioners openly recognised the necessity for further effort to teach the children of the poor in neglected districts; they agreed that the too early removal of children from school, when their elementary education was still incomplete, was a serious evil; and they also regretted the irregularity of the children's attendance and the insufficient attention given to the education of the younger classes. To remedy these defects, a revised code was prepared at the Education Department, shortly after the publication of the report, and was introduced in the House of Commons by the Vice-President of the Committee of Council, Mr. Lowe. The main features of this scheme were the substitution of one capitation grant for the various grants hitherto made, the grants in augmentation of teachers' salaries, the grants for gratuities to teachers, the

capitation grants, the grants for books and apparatus for Industrial Schools, which had been in force since Lord Lansdowne and Lord Russell set their machinery in motion, the object of the change being to test everything by the results of examination, making that examination, to a great extent, individual. This proposal, as also the suggestion that the reward of attendance for children should cease when they reached eleven years of age, met with a storm of disapproval from every quarter—from the clergy, from school managers, from teachers, and from a large section of politicians—and, in consequence, the revised code was withdrawn. Its consideration, in an altered form, was resumed in 1862, but the opposition to it in the House of Commons was still remarkably strong and unanimous. On this arose another great educational debate, not unworthy to be compared with that of the year 1847, and which brought to the front, for the first time on this question, on which he was afterwards destined to lead the House, Mr. William E. Forster, the Liberal Member for Bradford, whose speech on the American difficulty had already gained for him considerable notice. On the first night of the debate, the 25th of March, 1862, Mr. Forster came forward, in the interests of the school managers, as a partial opponent of Mr. Lowe's scheme, which he described as bureaucratic, and which, he warned the Ministry, would involve them in a course that would not only be impolitic, but unjust, because it would alter the relation between the State and those whom it had called into partnership, and, instead of reforming education, would injure and destroy it. The debate was continued for several nights until, at length, Mr. Lowe announced the willingness of the Government to make some important concessions, to allow a substantial portion of the grant to depend on the general report of the inspector, instead of solely upon the individual examination of the children; to give up the principle of grouping the children by age; and to undertake to submit to Parliament any material modifications of the code before their being carried into execution. With these amendments, the "fourth edition" of the revised code of 1861 was agreed to.

For the next eight years there was a lull in the educational world, and when the question once more assumed a prominent place in the Parliamentary *agenda*, the Member for Bradford was installed as Vice-President of the Committee of Council. During the interval, public opinion had been gradually forming on the whole subject, and the necessity for some more comprehensive measure than had yet been adopted, was beginning to be widely felt. Notwithstanding the immense exertions of the friends of the voluntary system, and the very considerable increase which had been made year after year in the grant from the national exchequer, notwithstanding the strenuous efforts of the promoters of the Ragged School system to catch the waifs and strays, who were left untouched by the ordinary machinery, the fact was gradually pressing itself upon thinking men of all classes that the work was still being done but imperfectly, and

that England was very far from discharging her duty in this all-important particular. The number of children on the registers of the State-aided schools in England and Wales alone was, it is true, very large, amounting to about 1,500,000, but there was a wide fringe outside in which even the meagre education of the private adventure school had little influence. There were, as Mr. Forster pointed out in 1869, in his first speech, as Mr. Lowe's successor at the Education Office, three great obstacles to the complete success of our educational system. In the first place, the small rural parishes could not qualify for the receipt of State aid; or, in other words, their school buildings were not up to the standard required by the authorities, and their funds would not enable them to secure teachers capable of working the children up to the level demanded by the Education Office. Next, there was a large pauper class in the chief towns who did not send their children to school at all. And lastly, there was a class of persons who could not very well do without the labour of their children, and who, therefore, did not keep them at school for a sufficient time. How to provide for these children, and at the same time so to arrange matters as not to interfere with the work which was being efficiently done, and which was not paid for, although it was assisted by the State, was the problem which Mr. Forster applied himself to solve. In 1869, the Irish Church Disestablishment Bill stopped the way; but in 1870, when Parliament was opened, on the 8th of February, Her Majesty's Message contained the announcement that education was among the subjects of public importance which appeared to demand the care of the Parliament, and that a Bill had been prepared "for the enlargement, on a comprehensive scale, of the means of National Education." A week later, the promised measure was read a first time in the House of Commons, when Mr. Forster made his introductory statement. Its claim to the title which was given to the measure in the Royal Message, was at once made clear by the very able speech of its framer. Reminding the House that only two-fifths of the children of the working classes between the ages of six and ten, and only one-third of those between ten and twelve, were on the registers of State-aided school, and therefore that, while of the former they had helped 700,000, they had left 100,000 unhelped, and of the latter while they had helped 250,000, they had left unhelped at least 500,000, Mr. Forster proceeded to unfold his scheme for gradually bringing these masses of the untaught into the educational net. The country, he believed, would demand of Parliament to compass two objects: to cover the country with schools, and to get parents to send their children to them; and his Bill was designed to accomplish both results. The country was to be mapped out into educational divisions, consisting of the civil parish in the county, and the borough in regard to towns; and steps were to be taken to ascertain whether these divisions were adequately supplied with efficient schools, in which case they would be "let alone." Where this was not the case, School Boards were

to be formed, elected by the ratepayers, and these Boards were to be armed with compulsory powers to enforce the attendance of children, while they were to be supplied by the vestries with funds, raised by means of rates, for the erection and maintenance of additional schools wherever they were needed. Denominational inspection was to be abolished, and a conscience clause was to be adopted, under which any parent could demand that his child should be allowed to withdraw from the religious education given in any school assisted by a Government grant. Under the old system, it will be remembered, there had been a conscience clause which was made the condition of the receipt of a building grant, but the new conscience clause was to be made one of the conditions of the receipt of the annual grant. As to the financial view of the question, Mr. Forster at once explained that it was not the intention of the Government to introduce a system of free education, although the Boards would be able to give free tickets where they deemed it needful; but they proposed to maintain the system of fees at the existing rate, so that one-third of the cost of the schools would be raised by the parents, one-third out of the public taxes, and, where the work was not done by voluntary effort, one-third out of the rates. On the latter point, Mr. Forster appeared to anticipate some of the criticism which experience has since proved would be offered on this addition to the already heavy burdens of local taxation; but he met it very much after the fashion in which Mr. Macaulay more than thirty years before had defended the then small outlay for the same purpose, by reminding the House that an education rate would save the prison rate and the pauper rate. Such, in brief, is an outline of the great measure which may be said to have revolutionized the system of primary education in England and Wales, and the formulation and execution of which at once raised Mr. Forster to a very high position among our statesmen.

Thus, in England, after a lapse of nearly forty years from the day when the State first resolved to lend her aid to the education of the people, we were at last brought face to face with a scheme, which at any rate possessed the merit of being founded on a clear recognition of the work to be done, even if opinions differed as to the method proposed for doing it. England, in fact, had arrived at the conclusion that she ought to do what Prussia had declared, as far back as 1832, that she had done for her sons, by affording the means of education to every child requiring it; and it is curious to note how nearly our statesmen followed the plan of M. Guizot, who, in 1833, introduced into the Chamber of Deputies, at Paris, his Bill for the regulation of primary education in France, which passed into law on the 28th of June in that year. That law compelled every commune or parish, either by itself or jointly with one or more neighbouring parishes, to provide at least one primary school, the expenses of which, with a dwelling-house for the master, were to be defrayed in part out of the fees levied on the parents of all

children who were able to pay them; while in cases where they were too poor to bear the expense, the master was required to instruct them gratuitously. This system, with the exception that the English school rate is levied, not only on the parents of the children taught, but on all persons who are liable to be assessed for local or national purposes, is now practically adopted among ourselves. That it was not introduced earlier, must, without hesitation, be ascribed as much to the existence of what may be termed "the religious difficulty" as to the apathy of the people in regard to educational interests. The work had for so long been done mainly by the Church, that the members of the other religious bodies, and the persons who objected to religious teaching in any form whatever, regarded with distrust any proposal for enlarged rates for educational purposes, owing to the belief that they would be placing increased funds, and hence increased power over the people, in the hands of the clergy; and it was, there can be little doubt, because Mr. Forster's scheme to a great extent met this difficulty. He gave, in fact, more than some of the strongest advocates of an educational rate had asked for. In the "Edinburgh Review" for October, 1855, we find a proposition for an education rate on the following plan:—"The State is to provide that there be a Church school in every parish or school district, maintained by the fees of the children and by the local rates, according to the provisions of the management clauses (the substitution being made of ratepayers for subscribers); which school might, with the consent of the majority of the subscribers, be the National School of the parish. It could not, however, be thus maintained by rates paid by the whole parish, unless it were subject to these two conditions: 1. That no child attending it, not being a baptised member of the Church, should be taught the Church Catechism. 2. That no child should be instructed in the Catechism, or otherwise in the distinctive doctrines of the Church, if his parents objected to his being so instructed." In other words, the writer of this article imagined that the adoption of such a conscience clause as is now actually in force in every Church school as a condition of the receipt of the Government grant, would satisfy the requirements of ratepayers; and he subsequently remarks, that "the fulfilment of these conditions being placed under the safeguard of the ratepayers, the Dissenters would probably in many parishes require no further concession." How far the Essayist was from realizing the strength of the feeling which was to grow up before the question was destined to be really settled, has since become evident; and it will not be forgotten that Mr. Forster's adherence to a conscience clause, such as the "Edinburgh Review" suggested, cost him the support of many of his former adherents. Instead of such a system we have now as the general rule the denominational school worked in every case with the conscience clause, as a condition for the receipt of a grant; and we have also the Board School, in which the religious teaching is limited

to Bible reading and Scripture history, and in which any dogmatic instruction on religious subjects is strictly forbidden.

In endeavouring, in conclusion, to show to some extent how far the promises of the Education Act of 1870 have been fulfilled, it may be well once more strictly to define its object in the words of the Report of the Education Department for 1872–73, in which we are told that "the first object of the Education Act of 1870 is to secure the provision of a supply of school accommodation sufficient to meet the educational requirements of the whole country. This supply may be provided in each district either by voluntary agency, or by representative boards elected by the ratepayers; and these boards may be established voluntarily on the part of the district, or compulsorily, when we (*i.e.*, the Education Department) have ascertained the existence of a deficiency which is not and will not be met by voluntary effort." At the time this Act was passed, the Education Officials in Downing Street estimated that the school accommodation in England and Wales was only sufficient for two and a quarter millions, whereas at least three millions of children ought to be in school, and with this view of the necessities of the case before them, they proceeded to put Mr. Forster's Act into force. Of its working, they supply in the Report for 1874–75, the following statement as drawn from the inspection of the day-schools in receipts of annual grants:—

	1870.	1874.
No. of Schools	8,919	13,163
Departments	12,061	17,646
Accommodation	1,878,584	2,861,319
Present at examination	1,434,766	2,034,007
Average attendance	1,152,389	1,678,759
Voluntary contributions	£418,839	£602,836
Rates	——	£135,991
School pence	£502,022	£814,283
Government grants	£587,490	£1,050,259

This, it must be admitted, presents a picture of educational activity which would have gladdened the hearts of those senators of bye-gone days who had to plead with the House of Commons for such a sum as 20,000*l.*, and the Committee of the National Society, in their annual report recently issued admit that "it may be fairly said that the intention of the Legislature to place means of education within easy reach of every child in the country is in course of accomplishment." How largely this has been due to voluntary effort, stimulated to increased exertions to prevent the spread of Board Schools, is clearly brought out in the Society's Report, which states that since the passing of the Act of 1870, the Society alone has voted grants to the amount of 91,043*l.*, which, with the local subscriptions and funds from other sources, represents a total expenditure of 1,456,466*l.*, providing accommodation for 293,999 children. This shows that the friends of the Denominational Schools are still determined to hold their

own in the race, and as a further proof to the same purpose the following statement is given of the average attendance in the inspected schools :—

Church of England	1,117,461
British and Nonconformist	322,633
Roman Catholic	100,372
Board Schools..	138,293
Total	1,678,759

In other words this shows that after four years' working of the Act eleven-twelfths of the children of this country are still educated in the schools of the religious bodies, and only one-twelfth in the Board Schools. While, however, there has been a large increase in the number of schools, as a direct result of the operation of the Act of 1870, a scarcely less important fruit of Mr. Forster's measure is the improvement of a considerable number of the then existing schools, and the employment of certificated instead of uncertificated teachers, in order to obtain the annual grant. Thus the number of schools seeking inspection for the first time at the hands of the Government officials rose from 500 in 1869 to 1,200 in 1870, while at Christmas, 1874, the number of acting teachers attending the examination for certificates was no fewer than 1,534, of whom 1,327 were successful, and have consequently been the means of bringing annual grants and Government inspection to their schools. For these results, whether arising from the anxiety of the friends of denominational education to prevent the necessity for the formation of school boards in their districts, as has frequently been the case, or whether due to the immediate action of the Boards, the Act of 1870 may unquestionably be credited. Accommodation is now provided in the 12,167 elementary day-schools which are under inspection for 2,871,826 scholars, who are trained in 17,646 departments, but accepting the number of children reported by the census of 1871 to be of school age, viz., from 3 to 13 (5,374,301, or about 23 per cent. of the population), and deducting from it one-seventh as being of a higher social scale than that for which provision has to be made, it leaves a total of three and a quarter millions of children who ought to be in daily attendance in the national or other elementary schools, so that there is still a great work to be done. To provide for the whole population of children of school age, who, under the compulsory powers of the Act of 1870, will sooner or later be forced into school, the Committee estimate that about 30,000 departments will be required, or 12,000 more than are at present in existence. To supply these new schools will, to a very large extent, be the work of the School Boards, which are either formed voluntarily by the ratepayers of the districts unprovided with the necessary school accommodation, or are established compulsorily, when the Education Department has ascertained that a deficiency exists in any particular district. Some idea of the time which will be occupied in the process may be formed from a glance at the progress of the School Board system since its establishment.

In September, 1874, the number of school boards had risen to 859, an increase of upwards of 300 on the previous year, while there was accommodation in the schools under the Boards for 245,508 children, or nearly double the number of the previous year, while the average attendance had increased in the same proportion. The total sum received by these 514 Boards in England was 1,877,265*l.*, and by the 123 Boards in Wales 142,491*l.*, the proportion of the income drawn from the rates being 71·6 per cent. in England, and 56·1 per cent. in Wales. Some idea of the enormous extent to which the School Boards have made use of the borrowing powers conferred upon them by the Act of 1870 and 1873 may be formed from the statement that the Committee of Council had at the date of their report in June last recommended the Public Works Loan Commissioners to make loans on the security of the rates in 986 cases, the amount lent being 4,179,173*l.* to 502 Boards. The average School Board rate in England for 1873–4 in boroughs was 2·13*d.* as compared with 1·63*d.* in 1872–73, and in parishes 3·22*d.* as compared with 2·9*d.* in the previous year, and in Wales 2·58*d.* in boroughs, and 3·01*d.* in parishes as against 1·74*d.* and 2·43*d.* While, however, this was the average throughout the country, there were very great variations in the demands made upon the ratepayers. In no fewer than 30 parishes and 2 boroughs in England, the rate was 9*d.* in the £, or upwards ; in 6 boroughs and 59 parishes, it was between 6*d.* and 9*d.* ; in 21 boroughs and 160 parishes, it ranged from 3*d.* to 6*d.* Two parishes, viz., Queensborough and Staplehurst, reached a rate of 1*s.* 4*d.* in the £, and the highest borough rate was at Chesterfield where it amounted to 10*d.* in the £. The School Board rate in London was equal to 1½*d.* in the £ upon the rateable value of the district. Of the total payments of the English School Boards in the financial year 1873–74, nearly three-fourths, 72·7 per cent., was for buildings, land, and furniture ; 11·6 for the salaries of teachers ; 3·6 for the salaries of officers ; and 4·6 for books, printing, rent, fuel, and light. The average cost of the accommodation for each child secured in the newly-erected Board schools is returned at 11*l.* 19*s.* 11*d.*. Fifty-three Boards paid the school fees for children under the 25th clause of the Act of 1870, by which it is enacted that the "School Board may, if they think fit, from time to time, for a renewable period not exceeding six months, pay the whole or any part of the school fees payable at any public elementary school in their district whose parent is in their opinion unable from poverty to pay the same ;" while fourteen Boards in England adopted the course, which is also in perfect accordance with the spirit as well as the letter of the Act, of paying the fees of children in lieu of or in anticipation of providing school accommodation for the children of the district. At Salford, Wakefield, and Maidstone, for instance, the Board had no schools under their control, so that a School Board without a Board School is an accepted and, as some persons hold, a very desirable method of carrying out the Act.

Into the large and interesting subject of the nature of the education now given in the elementary schools of the country, whether in connection with the various religious bodies or under the School Boards, we have not space to enter, suffice it to say that while in all cases it must reach the Government standard in order to gain the Government grant, it includes in many cases a far wider range of subjects, from cooking up to the most occult sciences. Education, in fact, as now provided, even for the *gamin* in the street, has advanced to a standard which would have horrified a past generation, unless, like Addison, in one of his essays in the "Spectator," they were sufficiently advanced to hold that "What sculpture is to a block of marble, education is to a human soul," and further, that "the philosopher, the saint, or the hero, the wise, the good, or the great man, very often lie hid and concealed in a plebeian which a proper education might have disinterred and have brought to light." Whether the elaborate curriculum of the School Board is or is not a "proper education;" whether by the elimination of direct, or perhaps it would be more correct to say of dogmatic religious teaching, it fulfils the highest end of education;—these and many like questions might be discussed at length, but our purpose is rather to show what is being done for the education of the English people as compared with what was done half a century ago than to enter on the troubled waters of the controversial part of this great subject. It may, however, be suggested that on the grounds of justice, no less than of economy, the ratepayers of England should in all cases scrutinize the action of their boards with the utmost care, and should oppose any policy which will have the effect of closing or crippling existing schools on any slight grounds. The conscience clause so effectually provides for the protection of the religious scruples of the people that there can be little fear of attempts at proselytism, and there is no slight danger that the failure to realize this fact may induce the inhabitants of certain districts to consent to the erection of schools which are not absolutely required, and the opening of which must lead eventually to the closing of the voluntary schools. In other words the people of England must sooner or later consider the question whether the School Board system is to become the sole educational machinery of the country, or whether it is, as we believe its promoter intended it to be, simply and solely a supplement to the voluntary system, which had, as is admitted on all sides, done such noble work in the previous half century, and the friends of which are still not only willing, but anxious to continue their operations. This is, as there are already many indications in the language of the candidates for School Board vacancies, the question which will present itself to the ratepayers at the next triennial election of our Educational Parliaments in November, 1876, and the existing members of the Boards have, in many cases to attribute to their own undue haste in the erection of new schools the feeling which is graining ground that they have been somewhat

precipitate. The battle which has been fought in the London Board over the statistics of the children of school age requiring education, and which is, as we write, once more being waged with an increased disposition to fight "to the bitter end" has arisen, rightly or wrongly, from the growing conviction that the Board has shown a disposition to usurp to itself functions which the Legislature never intended to confer upon it, and that in its desire to provide schools it has gone too far, and has seriously injured existing schools. Even those who are inclined to support the Board's action to a very large extent, are ready to admit that a new school census is a desideratum, if not a necessity, before any great lapse of time, and whatever way the present discussion is concluded, this view will undoubtedly be maintained. Another fact which is clearly brought out by a careful examination of the history of the subject, and which should be constantly borne in mind, is, that after all, school accommodation is a very illusory measure of the state of national education. The education cannot, it is true, be given without the accommodation, but the accommodation may, as the figures of the Education Department so unhappily prove, exist without the education. The movement for school building must, then, be coincident and coextensive with a movement for inducing or enforcing the attendance of the children and for the maintenance of a supply of competent teachers. In these latter points there are "rocks ahead" which do not lie in the way of the school building committees. Where direct compulsion has been exerted by the Boards, as in the case of the Metropolis, it cannot be said to have been successful, even if it has not, as some members of the Board have publicly asserted, proved a *quasi*-failure, and therefore it is very clear that this is one of the difficulties which still has to be dealt with. We are, in fact, approaching a condition of affairs in regard to the education of the English people when the old proverb, which says that "you may take a horse to the water, but you cannot make him drink," is very near fulfilment. The Education Department admits that this is the case when it tells us that "of 916,591 scholars below seven years of age in the schools inspected last year, only 444,007 (not one-half) had made the number of attendances required to bring grants to their schools, or, in other words, that the amount of education they had received had been utterly insufficient, and the Committee declare that "unless greater regularity of attendance can be secured, all the efforts of the last few years will have been made comparatively to no purpose." The same view was unhesitatingly expressed at the conferences conducted under the auspices of the National Society in the spring of 1875. This is, then, one of the main problems which still remains to be solved. Whether the teaching power can be maintained and increased in order to ensure an adequate supply of competent teachers for the largely increased number of schools is another very serious question. The competition in the teacher market has been naturally in-

creased of late years to such an extent that since the passing of the Act of 1870 the average salaries of certificated masters have risen from 95*l.* 12*s.* 9*d.* per annum to 107*l.*, and for mistresses from 57*l.* 16*s.* 5*d.* to 64*l.*, while in twenty-eight cases in 1874 masters, and in three cases mistresses, were receiving 300*l.* a year and upwards—a fact which is in itself sufficient to show how greatly the demand has increased and is likely to increase. To supply it is obviously as pressing a necessity as to erect schools or to compel the attendance of the children, and it is a significant, and in some respects an ominous, fact that the unsatisfactory nature of the teaching by pupil teachers in the schools established under the School Board for London—where high salaries are given in nearly all cases—is dwelt upon by the Board's inspectors in their recently issued report as one of the causes of the failure of the children in many of the schools. To meet the difficulty the London Board proposes to adopt a system of central class instruction for the pupil teachers of the schools in various districts by arranging them in blocks, and this, it can scarcely be questioned, will very materially facilitate the pupil teachers' preparation for their training college course. It is, however, to the training colleges that we must look as the source of future strength, and no one who has watched the progress of primary education of late years can deny that it is to the exertions of the principals and masters in these colleges—who are, by the way, by no means adequately rewarded for their labours—that the advance in the character of our national education is largely to be attributed. The accommodation provided in 1875 by the training colleges in England and Wales was sufficient for 3,076 students and 2,975 were in residence. In 1865 the colleges held 2,500 students and 1,822 were in residence. It is therefore estimated that the colleges can annually supply, on an average, about 1,500 teachers, who have been under training for two years; and this supply would be of itself sufficient to fill up the waste (calculated at 6 per cent.) in a staff of 25,000 teachers. With this state of affairs, the Education Department professes itself to be completely satisfied, and in its last report it is said, that looking at the large number of candidates for certificates who yearly enter the profession through other channels, recognized by the code, there is no reason to doubt that the supply of teachers will, before long, be found fully sufficient to meet the requirements of the country. The extent to which the training colleges have contributed to the existing supply of efficient teachers is shown by the fact, that of 9,691 masters employed in schools reported on by the Government Inspectors in 1873–4, 5,615, or 57·9 per cent., had been trained for two years; 1,308, or 13·5 per cent., for one year; while only 2,768, or 28·5 per cent., were untrained. In like manner, of schoolmistresses, 5,499, or 52·4 per cent.—more than half—had been trained for two years; 1,149, or 10·9 per cent., for one year; and 3,844, or 36·6 per cent., were untrained.

The following table shows the increase which has taken place

in the number of candidates for admission to training colleges and of students undergoing a course of professional instruction :—

	1871.	1873.	1875.
Church of England	1,700	2,038	2,051
British	286	420	432
Wesleyan	136	234	236
Congregational	50	50	49
Roman Catholic	143	154	208
Total	2,315	2,896	2,976

Among the inducements held out to the students to qualify themselves to give instruction in scientific subjects, the Education Department issued an announcement that success in the examinations in science, held in May in each year by the Science and Art Department, should be taken into account in determining the students' places in the class lists of candidates for certificates as teachers of public schools. The result of this was that a large number of students presented themselves for examination in scientific subjects at Christmas, 1874, of whom a very considerable proportion passed with credit. The following table will show the results of the examinations of the *male* students, numbering in all 1,345, who had at the May examination worked 4,144 papers :—

Subject.	No. of male students examined.	Number passed.	
		Elementary stage.	Advanced stage.
Animal Physiology	863	226	388
Physical Geography	830	73	270
Mathematics	678	70	284
Acoustics, Light and Heat	409	160	196
Theoretical Mechanics	389	223	42
Inorganic Chemistry	303	188	58
Magnetism and Electricity	285	104	170
Geology	154	113	8
Elementary Botany	101	30	49
Practical, Plane, and Solid Geometry ..	55	24	5
Applied Mechanics	47	24	4
Steam	29	2	15

Out of the twenty-three English training colleges for female students, eight sent candidates to the science examinations. The total number of *female* students examined at Christmas, 1874, was 1561 ; the number of science papers worked in May, was 1,100. The results of the examination were as follows :—

Subject.	No. examined.	No. passed.	
		Elementary stage.	Advanced stage.
Physical Geography ..	464	160	72
Animal Physiology ..	386	85	124
Elementary Botany ..	250	124	53

The number of students examined in drawing in 1874, was 2,658, of whom 1,929 passed the examination successfully. Another advance in the curriculum of the training colleges at Christmas, 1874, was in the introduction of ancient and modern languages in the admission examinations, when 172 papers were worked by males and 223 by females.

Not only, however, have the attainments of the masters and mistresses been raised in these and other important particulars, but an *esprit de corps* has been created, and a tone has grown up near akin to the public school and university clanship, which is the fruit of another part of our educational system. The profession of a schoolmaster is now daily receiving, as it deserves, increased honour, and it is only to be hoped that the extensive requirements of certain Boards, who, by offering very high salaries, can to a great extent control the market, will not lead the students to adopt the mischievous habit of "cramming" themselves, with a view to the repetition of the same process on others, instead of devoting their best energies to the acquirement of the art of teaching, which is, after all, of essential importance, and without which an acquaintance with occult sciences is of little value. That there is some danger in this respect is obvious when it is remembered that the whole of the Civil Service appointments throughout the Kingdom are now thrown open to competition, and thus that very system which has hitherto been adopted among the upper classes as a means of preparation for these appointments will inevitably extend to a still wider circle, and will it may be feared exercise a mischievous effect on the teachers as well as the taught. In this and other ways, then, there is ample evidence that we are still very far from a complete mastery of the subject, and the necessity for the appointment of a Minister of Education must, we believe, sooner or later force itself upon the public consideration. To the schoolmasters and mistresses, no less than to the managers, such a course would, we believe, at once commend itself, and the House of Commons, and the country generally, would very speedily appreciate the advantage of a system which would give the education office a responsible minister for its chief instead of leaving its work to officials who issue notices in the name of "My Lords," and who simply possess a mouthpiece in the Vice-President, who answers for the acts of the Department, but who, until he is entrusted with plenary power, can never be placed in a completely satisfactory position. This view is steadily gaining ground, and while admitting to the fullest extent that a great work has been accomplished under the present system, it must, we believe, ultimately be recognized that it is largely due to the adoption by a statesman of the duties of a Minister of Education while he occupied a position of far less dignity and emolument.

CHARLES MACKESON.

PART II.

ARCHITECTURE AND PUBLIC IMPROVEMENTS, PAINTING, MUSIC, PHILANTHROPY, LEGISLATION, STATISTICS, AND CHRONICLE OF 1874–5.

ARCHITECTURE AND PUBLIC IMPROVEMENTS.

1. General Progress.—Art and Public Monuments.

Amidst all the fluctuations of political, social, commercial, and theological affairs, the builder pursues the even tenor of his way. Whatever else is interrupted there is no abatement in building. In all degrees, from the fabric of national importance to the humblest tenement, the builder is active. London is in process of transformation. Since the epoch of the Great Fire, the City never underwent so general a reconstruction. And in nearly all our larger commercial and manufacturing towns, in sea-side watering places and suburban villages, a like process is going on, not on so extensive a scale, but to a greater extent probably than at any previous period.

In the character of the costlier secular buildings—ecclesiastical architecture moves on unruffled in the orthodox path—the most noteworthy circumstance has been the wide-spread extension of the so-called Queen Anne revival, to which, in its beginnings, we alluded last year. The style has been adopted everywhere in our urban architecture, and often for structures that do not come within that designation. It is the old story. When a style, be it Greek or Italian, Gothic or Renaissance, begins to weary from long continuance, some shrewd or ambitious architect bethinks him of a half-forgotten style, or variation of a style, copies it in a building if he finds the opportunity, or describes and engraves it in a publication. If it catches the popular eye its fortune is assured, and for awhile the revived style reigns supreme.

But, as we have been repeating year after year,—and as it will have to be repeated till the truth is not merely admitted but acted on—revival and reproduction, whether of classic, mediæval, or early or late renaissance buildings, is not architecture. Original invention is as essential in architecture as in any other art. A claim to the title of poet, painter, or sculptor, on behalf of one who had merely reproduced an old poem, picture, or statue, refurbished and with the rust of antiquity removed, would be laughed out of countenance: yet this is the every-day achievement of the architect.

Imitative architecture has, however, found an intrepid defender. In a recent number of the "Edinburgh Review" (No. 228, April, 1875,) it is asserted to be "not only a natural,

but an essentially truthful procedure;" while "the casting abroad for a new style, unless in cases where some special reason demands new arrangements," is, we are assured, "the act not of genius, but of pedantry." This is very odd. A plain man would suppose that, however natural, easy, and profitable to the architect the imitation of an old building might be, there was nothing "essentially truthful" in the procedure, but rather the opposite; and that this copying was hardly an act of genius, though in the process a good deal of pedantry may easily be and often is exhibited: and to be blandly told that he is utterly mistaken, and that invention is "the act not of genius but of pedantry," is very bewildering.

The reviewer, however, mistakes the point. What is asked for by those who desire something more than mere reproduction, is not "the casting abroad for a new style" with every new building, but that the old styles shall not be servilely copied; that, where an acknowledged style is adopted as the basis of the design, it shall be used as earlier or existent styles have been used in every age of true architecture, so as to adapt it—by modification, evolution, or development—to the actual conditions of time, place, and purpose, to the requirements, in short, of the age to which it belongs. A new building, one would say, is for the present and coming years, not for a century or several centuries ago. What is wanted now is what was demanded of old—that a building shall as perfectly as possible serve the purpose for which it is built, and be the most beautiful which the object, position, and materials permit.

Turning now to our national buildings, we may record the completion and formal occupation of the Home and Colonial Office, thus bringing to a conclusion the entire range of Government offices between Parliament-street and St. James's Park. Having last year described the Home Office, it will be enough now to remark that repeated observation of the building has confirmed the opinion we then expressed as to its dignity of aspect and admirable execution, and as to the care and taste with which the sculpture and ornamental details have been carried out. The principal or Parliament-street façade fails to produce the effect which might be expected from its magnitude, stately proportions, and elaborate decorations, mainly owing to its eastern aspect, and consequently being seen (except in the early morning) only in shadow. Had there been a free play of light and shade over it, the quantity and richness of the ornamentation might have been of great value. A building situated as this is, can only become effective by being arranged in bold masses and the general treatment being broad, large, and simple. The addition of the statues on the attic, and the ornamental terminals to the angle-towers, which the Ayrtonian economy cut off from the original design, would do much to strengthen the effect, and we cannot but hope that the sky-lines of the building will yet be completed in accordance with the architect's original purpose.

The Law Courts are making satisfactory progress, though little perceptible to the passer by. A building covering an area of seven acres, with walls of immense thickness, and almost innumerable divisions, must at best proceed slowly in its early stages. The works at the present moment are a scene of amazing activity. More than 1,000 men are busy in their several lines; fixed and portable steam-engines are driving saws, stone-rubbers, polishing-tables, moulding-machines, mortar-mills, and various other labour-saving appliances, whilst over head are large and complex travellers, steam cranes, and the like. The portion most advanced is the eastern quadrangle, facing Bell Court, which is to serve for Law Offices, and to be completed long before the main portion of the building. From this, however, as it will be visible so much sooner than the rest, it may be well to note, the character of the building must not be judged, this portion being much less ornate than the Law Courts proper. The great central arch, the bases of the columns, and in some cases the columns themselves, with other prominent features of the Strand front, are so far advanced as to allow the visitor to make out easily the main lines of the design, and behind it the great Central Hall. 231 feet by 48 feet, displays its vast dimensions,—about 60 feet shorter and 20 narrower, however, than Westminster Hall, which we are told it is to rival.

The Natural History Museum, the next most important national work, is also advancing steadily, but it is not likely to be completed and the collection arranged under three more years. The general plan was described last year. The proposed arrangement is simple and easily understood. The western half of the museum will be devoted to palæontology, or fossil fauna and flora, while the eastern half will contain recent specimens, or what is popularly known as natural history, the great central hall forming the link between the two, and giving ready access to both. A noteworthy peculiarity of the building is that the ornamentation throughout will be characteristic. The columns and capitals, the mouldings of the doors and windows, and other features will be decorated with plants and animals of distinctive orders and species instead of the usual conventional ornaments, those on the western wing of extinct, those on the eastern of existing species. The forms are selected as characteristic by the authorities in the Natural History Department of the British Museum, carefully modelled by a skilful artist in the building under the supervision of Mr. Waterhouse, the architect, so as to ensure their architectural adaptation as well as scientific accuracy, and then forwarded to Tamworth, where they are prepared in terra-cotta. This terra-cotta natural history decoration will be carried out with an unstinted hand throughout the building, and promises, from the portions already set up, to be very effective. Of course it would have been still better to have had the figures carved in stone by competent sculptors, when the forms might have been varied to any extent, whilst now they are of necessity frequently repeated; but with ornamentation

carried to the extent it is on this immense structure, the time and cost of their production formed an insurmountable obstacle. As it is, their preparation is found to be sufficiently tedious.

The India Museum has been removed temporarily to the Eastern Galleries of the Exhibition building at South Kensington, with the advantage that the collection can be conveniently seen, and its extent and value better appreciated than in the former almost inaccessible apartments. But the Exhibition rooms are unsuitable for such a museum, and it is much to be desired that the permanent museum, which it was officially announced would be erected in Charles Street, may be commenced without delay. Still better would it be that with it should be combined, as has been proposed, a Colonial Museum—both being on a scale worthy of the mother country and her dependencies.

It is satisfactory to feel that the present Commissioner of Works is alive to the importance of these institutions; and we may hope that the announcement he was empowered to make to the House of Commons towards the close of the last session, that "the Government had entered into negotiation with the Commissioners of the Exhibition of 1851 for the acquisition of a portion of their property at South Kensington, with a view to providing suitable sites for a National Portrait Gallery, and for a Patent Museum, not unworthy of those objects," will, under his auspices, be followed up by action.

The addition to the National Gallery approaches completion. It occupies a part of the site of the old St. Martin's Workhouse, on the north of the present building, and consists of a ground-floor and galleries. The lower rooms will be appropriated to the exhibition of the Turner drawings, students' apartments, store-rooms, &c. The galleries above will be on a level with the existing galleries, and approached from them by a great central hall, rather richly ornamented and lighted by a dome. The new rooms include a great gallery 120 feet long and 40 feet wide, the eastern gallery 96 feet by 40, and an octagonal gallery 40 feet in diameter—the walls of each being about 17 feet to the springing of the coved ceiling. Further remarks we may defer till the rooms are opened, and their fitness for their purpose can be estimated. The proportions seem well adapted for the exhibition of the larger works of the old masters.

The death of the designer of the Wellington Memorial has necessarily retarded the progress of that work, but all, or nearly all the sculptural portions of the monument are in the hands of the founder, and the structural portions are ready for their reception: another year will not, we may anticipate, pass without our being able to chronicle its final completion and assess its artistic value.

A statue of Richard Baxter has been erected in the town of Kidderminster, the scene for nearly twenty years (1641–60) of the labours of the great Puritan divine; and it is a noteworthy evidence of the change that has come over men's minds, that as the inscription on the pedestal testifies, "Churchmen and

Nonconformists united to raise this Memorial;" and that it was unveiled in the presence of the Bishop and the Dean of Worcester, the inaugural discourse being delivered by the Dean of Westminster and responded to by a distinguished Congregational minister, Dr. Stoughton. The statue is of white Sicilian marble, about ten feet high, and stands on a pedestal of grey granite, 12 feet high. Baxter is represented in Geneva gown, bands and cap, drawn up to his full height as in the act of addressing his congregation, the right hand raised aloft, the left holding a Bible which rests on a pedestal. The posture though animated and commanding is easy, the expression of the countenance earnest and fervid, yet void of contortion as we should expect that of the author of "the Saints' Everlasting Rest" to be. The hair flows over the shoulders in very unpuritanical curls; but for these, as well as the likeness, the sculptor has the authority of the best portraits. The work is from the chisel of Mr. T. Brock, a pupil of Foley, and is worthy of the master under whom he studied. The cost was about 1,250*l*. A memorial of another famous nonconformist divine, Isaac Watts, is in course of erection at Southampton, his native town; but this will consist of an Italian building—the Isaac Watts Memorial Hall—designed by Mr. Paull, of Manchester, of which the chief feature will be a great hall for religious meetings, and in addition there will be several large class-rooms and a spacious library.

A statue of the late Lord Mayo, Governor-General of India, assassinated in 1872, has been erected in the High Street, Cockermouth, the town he formerly represented in Parliament. The statue, which is from the studio of Messrs. Wills, is of Sicilian marble, 9 feet high, and stands on a granite pedestal 12 feet high. The likeness is said to be satisfactory; his lordship wears the viceregal robes which in their amplitude give dignity to the figure, but as a work of art it is not above the average. Better is the statue of a late distinguished Minister for Foreign Affairs, the Earl of Clarendon, by Mr. John Bell, which has been erected in the hall of the Foreign Office, although this again cannot be considered quite satisfactory.

At Todmorden a statue of the late John Fielden, M.P.,—a great local benefactor and widely known as an active promoter of the Ten Hours' Bill—was unveiled on the occasion of the formal presentation to the town of a new Town Hall, by Mr. Fielden's three sons. The statue, one of Foley's last works, is of bronze, and stands on a low granite pedestal in front of a portico on the north side of the new Town Hall (see the engraving of Todmorden Town Hall, somewhat further on). Fielding is represented as addressing the House (or perhaps a meeting), his right hand slightly raised, his left holding a scroll of paper which rests on the pedestal. The general pose is easy and unaffected; the likeness good: it is not, perhaps, one of Foley's best works, but better than the average of our memorial statues.

Joseph Pease, M.P., has been commemorated by the erection

in Darlington, with which place he was so long and so honourably connected, of a bronze statue, by Mr. G. A. Lawson, of heroic size, a good likeness and satisfactory as a work of art. On the sides of the granite pedestal, are bronze rilievi, illustrating marked phases in Mr. Pease's commercial, social, and political career—his connection with the mining and railway works of Darlington and its neighbourhood, and his labours in the cause of slave emancipation and the extension of education.

At Manningham Park, Bradford, has been erected, a statue by Noble, of Mr. S. C. Lister, a prosperous manufacturer and a man of great local influence. The statue is of Sicilian marble, ten feet high, and represents Mr. Lister standing erect with a foot rule in his right hand, a scroll of paper in his left. On the four sides of the pedestal are bas-reliefs, illustrating the progress of the art of weaving.

A colossal bronze statue of the late Mr. John Candlish, M.P. for Sunderland, by Mr. Bacon, has been erected in Sunderland Park.

Here, in the volume which he established, and for two and forty years edited, we can only record the completion of the memorial to Charles Knight, "whose chosen work through life," says the inscription, "was to bring good literature within the reach of all." A marble bust by Joseph Durham, A.R.A.—admirably executed, and an excellent likeness (we are writing with a cast of the bust before us)—has been placed in the Town Hall of Windsor, his birth-place and where is his grave; and two Charles Knight Scholarships have been founded in the School of the Stationers' Company. A replica of the bust has been placed in the National Portrait Gallery, by Mr. Knight's grand-children.

2. Public and Sanitary Works.

The Public Health Act of last session, consolidating, and in some matters amending, the laws in force, cannot fail to be of service. Especially is it of value in remedying the confusion arising from conflicting legislation and judicial decisions, eliminating redundancies, and reducing the law to a reasonable compass. It could only be mischievous if it were to be made, as some sanitary reformers fear, a means of checking further progress. Of this, however, the Act itself bears no evidence, and it seems most reasonable to regard it, as its author, Mr. Sclater-Booth, said he intended it, "not as a complete and final sanitary code, but as the first edition of such a code," and to study it with a view to its revision and extension. In fact as even the first edition of such a code, it is most imperfect. All the great evils are left uncorrected, almost untouched by it; but it enables the sanitary reformer to understand his exact legal position, and will serve as the basis for future legislation.

It is further of especial value as a ministerial and legislative recognition of the vast importance and growing urgency of sanitary measures. The questions of sewage, the pollution of

rivers, an efficient water supply to rural as well as urban districts, and above all, the improvement of local authority in matters of public health, have to be grappled with. Sanitary works must be undertaken in a more comprehensive spirit, on broader principles, and on a larger scale than the local authorities yet realize, and it will be for the legislature to provide an efficient machinery for carrying them out. The cost, too, of necessity enormous, will have to be considered, and some mode devised of meeting it that shall not too violently stimulate what has been called "the ignorant impatience of taxation." All this may not be beyond parliamentary capacity, but the problem in its entirety is one of which the magnitude can hardly be overrated.

The Commission appointed by the Crown to enquire into and report on the best means of dealing with the sewage of towns is an excellent preliminary to legislation, and the Commissioners are prosecuting their enquiries with so much care and energy that we may fairly anticipate from them a clearer view of the difficulties to be encountered and the means of overcoming them than was possible from the unaided and unconnected efforts of private enquirers, however able. Meanwhile, the local authorities, especially in our larger towns, are becoming more alive to the necessity for sanitary improvement, and important works, especially for the removal of sewage, are being undertaken in many parts of the country. Measures for preventing the pollution of our rivers are still too commonly only undertaken under compulsion and very inadequately executed.

The vast metropolitan drainage system, commenced in 1859, has been at length completed by the opening (August 5, 1875,) of the Western Pumping Station, by which the sewage of the western district, embracing Brompton, Chelsea, Kensington, Hammersmith and Fulham, an area of 14½ square miles, which had been hitherto delivered into the Thames, at Cremorne, is now received in wells at the pumping station and pumped thence into a higher section of the main drainage. Flowing to the Abbey Mills Station, it is there again raised by pumping, and flows onward by gravitation to the discharging station at Barking. The Main Drainage System as now completed, includes a total length of 82 miles of main sewers, connected with which is a length of over 700 miles of local sewers; drains an area of 117 square miles; receives and carries away the sewage of a population of over four millions, and has cost 4,607,000*l*. The work is one of unrivalled magnitude, has been carried out with unceasing care and regularity, and executed throughout in an admirable manner, and with the best obtainable materials. The only drawback to the completeness and excellence of the scheme is that the sewage is finally discharged unchanged into the Thames. The discharging stations at Barking, for the drainage of the area north of the Thames, and Crossness for the southern area, are 14 miles below London Bridge, but there are several towns and villages below the outfalls, and though the Metropolitan

Board of Works asserts that owing to the precautions taken to limit the outlet to high-tide, no injury is sustained by the discharge, it is inconceivable that so enormous a quantity of sewage, upwards of half-a-million metric tons, can be discharged into the river daily without materially polluting it.

The Western Pumping Station occupies the site of the old Chelsea Water Works, between the Grosvenor Canal and the London, Chatham, and Dover Railway, the main building, which faces the Thames, is a large and handsome Italian edifice of brick and stone, crowned with a tall Mansard roof, and having a square detached chimney and ventilating shaft 172 feet high. The works cover an area of 4½ acres, and cost, with the machinery, about 200,000*l*. The engineer of this, as of the whole of the Main Drainage Works, was Sir J. W. Bazalgette.

The Thames Embankment, the other great achievement of the Metropolitan Board of Works, is being gradually lined with buildings of a more or less important character. In addition to the offices of the London School Board—a building by no means creditable to the educational luminaries of the Grand Junction Canal, ugly without and inconvenient within—new and showy offices of red brick and stone, with lofty gables, and near these an equally extensive and prominent commercial building, both designed by Mr. D. C. Nicholls, have been erected, whilst by the huge St. Stephen's Club House, the walls are being raised of a National Opera House which will have a more pretentious exterior than any theatre yet built in London, and perhaps on that account has been permitted to encroach somewhat unduly on the line marked out for the frontages of buildings along the embankment. The trees planted along the roadway have taken root and promise to afford in a few years a welcome summer screen. Shade is at present much needed along the embankment. A new garden which has been added (that in which stands the Outram statue) to those previously opened, provides a pleasant bit of verdure, bright flower beds, smooth walks, and abundant seats (which are fully appreciated). And, let us remark in passing, that seeing they are so sought after, it is amazing that in our parks and open spaces, and along our public ways, there are comparatively so few seats, and those commonly placed with so little judgment. The vestry of St. Pancras deserves honourable mention for having departed from parochial precedent and placed comfortable seats in several of the main thoroughfares, and, whenever it has been practicable, placed them where the wearied pedestrian may obtain shade and a pleasing prospect as well as rest.

Northumberland House is pulled down and the ground is being cleared for the formation of the Charing Cross approach. The engineer will evidently have some trouble in obtaining the fine termination we were promised to the vista in looking either to or from the embankment. The property required for the new street which the Board is about to form from Oxford Street to Old Street, has for the most part been acquired, and the work of

demolition in some places, of construction in others, is proceeding. The most difficult undertaking on the line, the iron girder-bridge, 120 feet span and 60 feet wide, which will carry the street across the Metropolitan Railway, between the Clerkenwell Sessions House and Farringdon Road, has been commenced.

The Board has also secured some additional open ground, and now has under its control 1,030 acres of parks and open spaces devoted to public use within the metropolitan boundaries. Epping Forest, or so much of it as is left, a tract of over 3,000 acres, may be regarded as effectually secured, all that remains now being the adoption of a scheme for its future management, and the decision of the extent to which recent encroachments shall be abated. The New Forest we may hope will also be saved, the Select Committee appointed by the House of Commons to inquire into the present condition of the forest having come to the resolution to recommend to the House "that the New Forest shall remain open and unenclosed except to the extent to which it is expedient to maintain the existing right of the Crown to plant trees." On the other hand, the singularly interesting relic of antiquity, Cæsar's Camp at Wimbledon, with the ground about it, seems to be doomed to destruction, notwithstanding the strenuous efforts that have been made for its preservation. The land has been broken for building, and the materials for carrying out this discreditable piece of vandalism are now on the ground.

The movement for securing open spaces for our larger towns where they exist, or providing them where they are wanting, is spreading throughout the country, and it is an honourable feature of the time that in many instances these benefits have been provided by private munificence. Sheffield has been the recipient of one of the most splendid of these gifts. The mayor, Mr. Mark Frith, has handed over to the Corporation for public use a pleasantly situated, undulating tract of well-wooded ground, which has been appropriately named Frith Park, and which was formally opened August 16, 1875, to the great delight of the townspeople, by the Prince and Princess of Wales. But not content with this noble gift, Mr. Frith has, at a cost of 30,000*l.*, built and endowed, outside the town, a picturesque group of comfortable and well-fitted almshouses—34 for single persons, natives of Sheffield, who each receive 7*s.* a-week; and 12 for couples, married persons, or sisters living together, who have an allowance of 10*s.* a-week. Further, he has announced his intention to erect a building for the lectures and classes established in connection with the Universities of Oxford and Cambridge, and offered, under certain conditions, a sum of 1,000*l.* towards providing scholarships. Deeds like these worthily rival those of the merchant princes of old. The Free Museum in Weston Park, Sheffield, has also been opened. The park itself was opened in 1874. The Town Council are further endeavouring to purchase Meersbrook Park, of over 100 acres, for preservation as a public park.

Swanage has received a gift of a public park, described as very pleasantly situated at Knapllwyd,—from Mr. John Dillwyn Llewellyn, of Penllergare. Barnsley has also received a like benefit; not indeed a new park, but a handsome addition to one already existing. In 1860, the widow of Joseph Locke, the eminent civil engineer, presented to the town a park of 18 acres, which received the name of Locke Park, and in which, a few years after, a statue of Locke was erected by the Institute of Civil Engineers. Miss McCreery, sister of Mrs. Locke, has now added 22 acres to the park, more than doubling its size, and adding greatly to its usefulness as well as beauty, and has announced her intention to erect a lofty tower on the highest part of the park, in order to command a panoramic view of the surrounding district.

The Artisans' Dwellings Act of last session was devised with a view to provide an efficient remedy for the ever-growing difficulty, often commented on in this section of the "Companion to the Almanac," of supplying sufficient healthy dwellings for the labouring classes in our larger towns. It provides that the Local Authorities in towns of 25,000 inhabitants may, on the report of the medical officers or sanitary board, acquire property and buildings of an unhealthy character, by compulsory purchase for the purpose of improvement; and either build, or let the land for building, in accordance with a scheme prepared with special regard for the accommodation of the working classes, and sanctioned by the confirming authority—which for the metropolis is the Home Secretary, for the rest of the country, the Local Government Board. Provision must in every such scheme be made for at least as many persons of the working classes as have been displaced by the improvement.

It is an obvious objection to the Act that its provisions are confined to towns of 25,000 inhabitants. If good for a town of 25,000 inhabitants, why not equally suitable for one of 10,000, or even a smaller number? But the statute is of unquestionable value as it stands. It is a tentative measure, and if the experiment succeeds its scope can easily be extended. One of its greatest advantages is that the machinery by which it is to be carried out is simple, the action prompt, and the procedure inexpensive.

The Act was not long in receiving testimony to its practical efficacy. Hardly had it received the royal assent when the local authorities of two of the poorest, most densely populated, and most wretchedly-housed districts in London, the District Boards of Holborn and Whitechapel, prepared improvement schemes, and made the necessary application to the Metropolitan Board of Works for power to carry them out; and Liverpool and other towns were not slow in following their example. How extensive some of these schemes may be is evident from that of the Holborn Board, which proposes to remove the entire mass of wretched tenements included within the parallelogram extending from Portpool lane on the north to Holborn on the south, and

from Leather Lane on the east to Gray's Inn Lane on the west, an area of 67,222 square yards, or nearly 14 acres. St. Alban's Church, of ritualistic notoriety, would be spared; and the factories would be untouched, leaving 10½ acres to be dealt with. Twenty-four courts and alleys would be swept away. According to the amended scheme, "the labouring population living upon the area to be dealt with, is 5,515, one half of whom are adults, the other half children." The cost of the improvement, exclusive of the cost of widening Gray's Inn Lane, is estimated at 374,500*l.* The Board of Works recommend that only one-fifth of the population shall be displaced at a time; still, if several of these schemes are carried out simultaneously, it is difficult to see how sufficient provision can be made, during the rebuilding, for the great number of persons who will be displaced. And there is the further and very grave consideration, how provision can be made at all for the class who herd in the worst of the foul dens which it is proposed to remove. "Artisans' dwellings" of the kind hitherto built are beyond their reach, and yet it cannot be contemplated that they shall be driven out to create a new centre of beggary, crime, and disease in some other poor or declining locality, as they assuredly will do if left to themselves.

The Corporation of the City of London have built a block of industrial dwellings on the north side of Charterhouse Street. It is a neat, substantial, and well-arranged structure in four flats, comprising in all forty distinct dwellings, each containing parlour, bed-room, and kitchen. A balcony in front of each floor communicates with the dwellings, and a common stone staircase is carried through the centre of the block. The weekly rental is 8*s.* 6*d.* for the larger dwellings, 7*s.* for the others.

The trustees of the Peabody fund have opened the largest, the most complete, and the best arranged of their buildings, on the site of the old Magdalen Hospital in the Blackfriars' Road. The buildings, which are by the same architect, and bear a general resemblance to those previously erected, but with many improvements in the internal arrangements, cover an area of 2½ acres, consist of 14 separate blocks, and will accommodate 352 families. The number of families now residing in the Peabody buildings is over 1,300, comprising upwards of 5,000 persons. Twelve new blocks, containing 264 tenements, are in course of erection in Southwark Street, and are expected to be ready for occupation early in 1876.

The Improved Industrial Dwellings Company have completed a block of buildings in Wapping, and are carrying forward others in the Goswell Road, and in Tothill Street and Upper Garden Street. They have in all expended over 323,000*l.* on their improved dwellings, and provided about 1,600 separate tenements. The buildings in course of erection will supply over 600 more, thus furnishing ample and wholesome accommodation for some 10,000 persons. The Metropolitan Association for Improved Dwellings has contributed its quota to the good work by the com-

pletion of its vast structure in the Farringdon Road—five great blocks, each seven storeys high. Other societies, and some private individuals are at work in the same good cause—but for reaching the helpless, lowest stratum, we must look to the Local Authorities proceeding under the Artisans' Dwellings Act. We cannot notice them specifically, but we must mention the efforts made by Exeter and other provincial towns to provide better industrial dwellings even before the passing of the new Act.

New waterworks have been completed by the Corporation of Preston, which will afford an increased supply to that town of over six million gallons daily; and other new works and reservoirs have been completed or undertaken at Liverpool and several other towns. The very excellent provision of drinking fountains and cattle-troughs is steadily extending. Several fountains of a more than usually ornamental character have been opened. In London, the most remarkable is that erected in Park Lane, at a cost of 5,000*l*., defrayed by the late Mrs. Browne. It forms a pyramidal group rising from a capacious granite basin. The pedestal is ornamented with bronze figures of Tragedy, Comedy, and History; the central stage with white marble statues of heroic size of Shakspere, Chaucer, and Milton; and above this is a column surmounted with a bronze figure of Fame. The sculptor, Mr. T. Thornycroft, was also author of the design. The Baroness Burdett-Coutts has presented a handsome drinking-fountain to Manchester, and several fountains of superior character have been opened in other towns.

A swimming-bath, of good and ornamental design, has been erected in Seymour Place by the Marylebone Vestry. The bath itself is 73 feet by 26, and deepens from 4 to 6 feet. The architect was Mr. Saxon Snell; the cost 4,250*l*. A larger but less ornamental one has been erected at Brixton from the designs of Mr. F. H. Fowler, at a cost of about 14,000*l*. The swimming-bath, 150 feet by 60, is said to be the longest in London. The depth varies from 3 feet 6 inches to 8 feet. A floating-bath has been placed on the Thames, by the Charing Cross Railway Bridge, close to the Thames Embankment, which affords a bathing space of 125 by 25 feet.

Railway progress continues unabated. The return for the week ending August 29, 1875, is on 14,757 miles of railway in operation (the total completed in the United Kingdom at the end of 1874 was 16,449 miles), an increase of 171 miles on the corresponding week of last year; the receipts of the week being 1,195,598*l*. For further particulars, we must refer the reader to other articles. Railways have outgrown this section of the "Companion."

3. Churches and Chapels.

Last year we alluded to some statistics of church building recently published. A revision and extension of these statistics seems to show that the number of new churches built in England

and Wales during the years 1801–71 was over 3,200; of old churches rebuilt, 925; and that during the last ten years of that period the average number of new churches consecrated was about 115. Taking this as the rate of building during the three subsequent years, we have the enormous aggregate of at least 4,500 churches built in the present century. The outlay, at a moderate estimate, must have been very nearly if not quite 25 millions sterling. To this should be added, to gain a fair conception of modern church work, the restorations of old churches, which of late years have far exceeded in number the average of new churches.

That in such an extent of church building so little originality should have been evolved is amazing. For a long series of years our ecclesiastical architecture has been exclusively mediæval in style, and in all these years it has remained not merely mediæval in style, but in idea. There has been no advance, no development, no adaptation. What was done five or six centuries ago, has been done in these last years—as much and no more. Always there is repetition of the old forms, features, details. Whatever the size, or the situation—whether in narrow street or open plain, on hill-side or summit, in country lane, or railway suburb—the church only differs as the whim of the patron or the fluctuation of fashion dictates. With abundant superficial variation the fabric continues to be essentially imitative; and the imitation being mainly of forms and details, and the more obvious external distinctions of what are called styles, the building scarcely ever attains grandeur of mass, or unity and dignity of expression, though frequently reaching a certain tame and quiet elegance of character, with much delicacy and refinement of finish.

The fashion of the past season in churches has been persistently for First Pointed of a late type. Where Second Pointed buildings have been erected, they have generally had some First Pointed details. What has been special has generally been observable in the interiors, and has consisted mostly in an exaggerated use of forms, fittings, and decorations, only suitable for the ultra-ceremonial which has become a fashion in a particular section of the Church of England of late years. Unhappily there is nothing in the artistic character to compensate for their want of truth.

In London, besides some of the old city churches, the churches of St. Mary, Whitechapel, and Stoke Newington have been demolished, or soon will be, their places being supplied by larger and more pretentious structures. In place of one of the demolished city churches a new edifice has been erected by the Clothworkers' Company, in Prebend Square, Islington, and dedicated to St. James. It is neat and well built in the prevalent fashion of Gothic; was designed by Mr. F. W. Porter; will accommodate a congregation of 500, and has cost 8,500*l*. In the tower is a good peal of six bells. In Hoxton Square, a larger, and of its order, a very good church, St. Peter's, has been

erected at a cost of some 12,000*l.* St. Mark's, Battersea Rise, is a good brick church, designed by Mr. W. White; early Second Pointed in style; and has nave and aisles with tall clerestorey, transepts, and very large apsidal chancel, organ chamber, and vestry, small tower, spire, and porch, at the west end, south porch, and vestibule. Around the apse is an ambulatory, with steps leading from it to a crypt beneath. The high altar, which is reached by a flight of nine steps, is surmounted by a tall gilt cross, supported by an angel on each side. The apse windows have representations of the Virgin and various saints. St. John the Divine, Vassall Road, Kennington, is an equally elaborately ritualistic red brick church, by Mr. G. E. Street, R.A., and is intended to accommodate 1,000 persons in chairs. It comprises a nave 125 feet long, aisles, chancel, 45 feet long, and separated from the nave by a low screen, south chapel, priests' and choir vestries, baptistry, organ chamber, cloisters, and south porch. The tower and spire, which are to be of great height, are not yet built. The chancel arch is 51 feet high. The altar is reached by a flight of eleven steps. Behind the altar is a lofty reredos, having in the centre a life-size figure of Christ on the Cross, and in panels numerous scriptural and later saints, and symbolical figures. The south chapel is fitted with a piscina. The nave has a ceiled waggon roof 60 feet high. The church has already cost nearly 20,000*l.*, and will require 6,000*l.* or 7,000*l.* more for its completion. St. Saviour's, Poplar, Messrs. Frances, Architects, has nave and aisles with clerestorey, deep chancel, chapel on south, narthex, organ chamber, vestries, &c. It is early Second Pointed in style; is built of stock bricks, with red bricks in bands, &c., and has Bath-stone dressings, nave, piers, and capitals; will hold 750 persons, and has cost 7,000*l.* St. Mary's, Brookfield, Dartmouth Park Hill, Kentish Town, is also a yellow-brick church, with red and white streaks; Second Pointed in style; designed by Mr. Butterfield. Of unusual height, and waiting for happier times for its tower and chancel, the tall, truncated nave looks very much like an attenuated barn. The interior, from its great height, simplicity of arrangement, and good distribution of light, is more effective.

St. Stephen's, Clewer, is a very pretty First Pointed structure externally, whatever may be thought of the taste or propriety of the internal fittings. The architect was Mr. H. Woodyer. St. Philip's, Worcester Park, Cheam, is a small red brick and stone church, designed by Mr. Herbert Carpenter, with some good points, though not attractive as a whole. St. John the Baptist, Eltham, is a handsome and well-finished First Pointed structure, designed by Mr. A. W. Blomfield, and erected at a cost of 10,000*l.*

As examples of country churches we may quote two at Brighton, which will serve to indicate the direction of current ecclesiastical architecture and internal decoration. St. Martin's, Lewes Road, consecrated last May, is a costly structure, erected by the sons of the late Rev. H. M. Wagner, vicar of Brighton, as a memorial of

their father. The architect was Mr. Somers Clarke, junior. It is built of brick and stone, the inner walls plastered, and is of unusual dimensions, the interior being 174 feet long and 64 wide; the height to the ridge of the ceiling 70 feet, to the ridge of the roof 83 feet. The tower, which is oblong in plan and placed over the chancel, is at present unfinished, but is intended to be 150 feet high. First Pointed in style, the exterior presents no feature calling for special comment, but the interior, of which there is a large and very good engraving in the "Builder" (June 26, 1875), is somewhat remarkable. The nave piers carry a triforium. The roof of the nave is of wood, coved and panelled; that of the chancel, groined. Above the pulpit is a sounding-board, rising into a very tall canopy, richly carved, and having figures of saints in the panels. The chancel is divided from the nave by a low screen, high above which a carved rood-beam stretches across the chancel-arch and supports an immense floreated cross. On the left of the chancel is an organ chamber, on the right a gallery for an instrumental band, on the floor of the chancel seats for a full choir. The "high altar" stands on a platform reached by ten steps. Behind it is a retable, with figures of the Apostles in panels under canopies, in the centre being a crucifix under a richer and larger canopy. A second, or low altar, stands in a small side chapel, on the right of the chancel. But the great feature of the interior is the lofty reredos behind the high altar. This is of wood, carved and gilt, and forms an elaborate frame-work to a series of twenty compartments, in two stages, all the panels having oil paintings, by Mr. Wooldridge, the upper stage symbolizing the Incarnation, the lower the Atonement. The centre of the upper stage is occupied by a representation of Christ on the Cross, with his Mother on one side and St. John on the other—not looking to the cross, but, as witnesses, towards the people. In neighbouring panels are, on one side, the Evangelists, St. Paul, Phœbe, and Priscilla, on the other, Abraham, Moses, and the greater Prophets. The centre panel of the lower stage has a representation of the Adoration of the Magi, with St. Joseph and St. Anna. In the side panels are, on one side, leading personages of the old dispensation, Joshua, Gideon (with his cloak and lamp), priests, kings, and minor prophets. On the other side are the fathers and leading personages in Church history, St. Jerome, St. Gregory, and St. Ambrose, and, in another row, St. Francis, of Assissi, and the like; royal saints, St. Elizabeth, of Hungary. St. Louis, of France, and Charles I, of England. Lower down are later sons of the Church, Bishop Wilberforce, John Keble, William Gibbs, Mr. Wagner, and so forth; the "chief champions of truth," SS. George, David, Andrew, and Patrick, Judas Maccabœus, Judith, and the Three Holy Children, completing the hemicycle. Altogether, a curious assemblage of saintly effigies to find about the "high altar" of an edifice belonging to the Establishment.

St. Bartholomew's, Ann Street, Brighton, built at the cost of the

Rev. Arthur Wagner, from the designs of Mr. E. E. Scott, is a still larger edifice than St. Martin's, and is, in some respects not less remarkable. Its external length is 180 feet (internal 170 feet), and the chancel wall is so built that the church may, at a future day, be lengthened to any extent desired. The width is 58 feet. The walls are 90 feet high; the roof 55 feet higher. The walls are of stock brick, relieved by bands of Portland stone and a diapering of red brick. The style is First Pointed, of Italian type. The church stands north and south, the chancel being at the north end. The entrance is at the opposite end, by a doorway with a circular arch, above which is a statue of St. Bartholomew, under a rich canopy, and high up, rising within the gable, is a circular window 20 feet in diameter. All the windows are at a considerable height from the ground. The interior has, at present, only the structural ornamentation, in which terra-cotta and ceramic ware are much employed. The nave arcades have massive square piers. The chancel fittings are only temporary, but the eye is arrested, on entering the church, by an enormous cross, 20 feet high, cut out of chalk, with a representation of the Saviour painted on it. The floor of the church will accommodate a congregation of 1,500, in chairs.

A third church, St. James's, has been erected at Brighton, also designed by Mr. E. E. Scott, but is less hybrid in character, and not so eccentric in its proportions. It is late First Pointed in style, is constructed of flint, with Bath stone windows and dressings, and comprises nave and aisles, with well-lighted clerestorey, and chancel. The extreme length is 89 feet, width 66 feet, height of the walls 39 feet, of the roof 23 feet. The roof is of open timber work. The church will seat about 750 persons.

With the help of the professional journals, the illustrated and local newspapers, and private information, we give a list of other churches completed during the year, arranged, as in former volumes, under the First and Second Pointed (or Early English and Decorated) styles. When not otherwise stated, the churches may be understood to comprise nave, aisles, and chancel, vestry, usually a tower, and often a spire.

Among the churches First Pointed in style are:—St. John the Evangelist, *Farncombe*, Surrey, designed by Sir G. G. Scott, and partly erected some years back. St. Peter's, *Newton-le-Willows;* architect, Mr. H. B. Bare. All Saints, Newtown, *Alton*, Hampshire; cruciform, with apsidal chancel and sedilia; of Selborne stone and flints, with Bath-stone dressings; architect, Mr. F. C. Dyer. St. Anne, Park Hill, *Moseley*, Birmingham; at the cost of Miss R. Anderton, of Moseley, on a site given by Mr. W. F. Taylor, of Moseley Hall; 400 seats, cost nearly 7,000*l.* St. Peter, *Little Aston*, Shenstone, Staffordshire; erected and endowed at the cost of the Hon. E. S. Parker-Jervis; has nave and aisle, chancel, and tower and spire at the north-west, in which is a peal of five bells; interior richly decorated; pulpit, font, and reredos of coloured marbles; 150 seats, all free; architect, Mr. G. E. Street, R.A. *Howle Hill*, Shropshire; about 100

sittings, cost 1,300*l.*, defrayed by Miss Phillips, of Walford; architects, Messrs. Haddon, of Hereford. All Saints, *Llanelly;* of native stone, with Bath-stone dressings; cruciform; the tower, on the south, to be completed at a future day; interior rather elaborately decorated; choir stalls of carved oak; architect, Mr. G. E. Street, R.A. Christ Church, *Dafn*, near Llanelly; of local stone, with freestone dressings; 500 seats. St. Paul, *Marston;* of brick throughout, moulded bricks being used for piers, arches, windows, and doorways; architect, Mr. Douglas, of Chester. St. Nicholas, *Radford* (a chapel-of-ease to Holy Trinity Church, Coventry); bell-cote on west gable; 300 sittings, all free and unappropriated; architect, Mr. G. Taylor. All Saints, *Haywood*, near Doncaster; of local stone, lined with pressed bricks; tower and spire 100 feet high; 150 sittings; cost 3,000*l.*; erected by Mr. S. Birch, as a memorial of his late wife; architect, Mr. J. Pearson. St. Mary, *Chute Forest*, Wilts, erected by Mr. T. E. Fowle, of Chute Lodge, of brick and flint, with stone dressings; consists of nave, chancel, and south transept, over which is a lofty spire, containing a peal of six bells, with a chiming apparatus; in the chancel is an elaborate reredos, and the east window is filled with painted glass. *Newbury*, Berks; erected at the cost of Mr. Morgan, father of the vicar of the parish. St. Luke, *Chesterton*, Cambridge; cost 4,500*l.* St. Nathanael, *Cotham*, Bristol; of Pennant stone, with Bath-stone dressings; cost 6,000*l.*; architect, Mr. J. Bevan. *East Hardwick*, near Pontefract; cost about 2,500*l.* St. Peter, Mill End, *Rickmansworth;* cruciform, of flint, with Bath-stone dressings; erected, chiefly at the expense of Mr. E. C. Walker, from the designs of Mr. S. C. Sutton. St. James, *Welland;* nave and south aisle, chancel, with organ chamber on the south, and tower and spire, 85 feet high, on the south-west; the east window filled with painted glass, by Hardman; 400 sittings; architect, Mr. J. W. Hugall, of Oxford. St. John and the Holy Cross, *Cotebrook* (a chapel-of-ease to Tarpoley Church); of local red sandstone; 200 seats, cost 1,800*l.*; architect, Mr. G. E. Street. St. Paul, *Clacton-on-Sea;* walls of concrete, with shingle dashing; semi-decagonal apse, square tower at the south-west angle; 350 seats, cost about 1,000*l.*; architect, Mr. G. G. Pye, of Colchester. St. John the Baptist, *Hartford*, Cheshire; of local stone; cruciform; tower and spire left unfinished; 500 seats, all free; architect, Mr. Douglas, of Chester. *Builth*, Brecknockshire; of local stone, with Bath-stone dressings; 450 seats; architect, Mr. J. Norton. St. John the Baptist, *Hawthorn Bank*, Lincoln; of Ancaster stone, with Casterton stone dressings, the interior lined with Corsham stone; erected, with vicarage and schools and provided with an endowment of 300*l.* per annum, by Miss Johnson, of Fairfax House, Spalding, at a cost of nearly 20,000*l.* St. John the Evangelist, *Ashley Green*, Chesham, Bucks, erected at the cost of Miss Dorian, of Clifton. *Baraset Alveston*, near Stratford-on-Avon; erected, with school-rooms and several brick cottages, of a superior class to those

already in the village, at the cost of Mr. J. W. Carlile, lord of the manor. St. Nicholas, *Manea*, Isle of Ely ; 430 seats, cost 3,800*l.* Emmanuel, West Hill, *Hastings ;* First Pointed, nave with clerestorey ; tower ; exterior, Kentish rag, with Bath-stone dressings ; interior lined with coloured bricks ; architects, Messrs. Jeffery and Skiller. Christ Church, London Road, *St. Leonards ;* a large and handsome structure, of rough Kentish rag, with Bath-stone dressings ; erected in lieu of a former church which had become inadequate to the requirements of the congregation. The new church affords accommodation for 1,100 persons, in chairs ; the nave is separated from the chancel by a screen, over which is a rood-beam, with very large wooden cross, and figures of angels on either side ; chancel elaborately decorated ; architect, Mr. Blomfield. *Esterton*, Market Laverton ; 280 seats ; cost, about 1,300*l.*, defrayed by the Hon. Mrs. Hay, who has added 50*l.* a year to the endowment of 150*l.* bequeathed by the Rev. Mr. Rogers. *Hamsteels*, Esh, near Durham ; a colliery village church, for a congregation of 250 ; cost 1,200*l.* *Under River*, Seal, near Sevenoaks, Kent ; an elegant little building, for a congregation of 200, designed by Sir G. G. Scott, R.A., and erected at the cost of the late Right Hon. J. R. Davidson, Q.C., of Under River House, as a memorial of his mother. St. Thomas, *Halliwell*, near Bolton, Lancashire. St. Mary Magdalene, *Faceby*, Whorlton, North Riding of Yorkshire ; on site of the old church, which had become dilapidated ; architect, Mr. Falkingbridge, of Whitby.

In the Second pointed Style (most of them being early Second Pointed), the following churches have been completed :—All Saints, *Clayton West*, near Barnsley ; architect, Mr. E. Hughes, of Huddersfield. All Saints, Broad Green Road, *Old Swan*, near Liverpool ; 800 seats, half free ; cost 3,700*l.* ; architects, Messrs. C. D. Barry and Son. St. Michael and All Angels, *Paulton ;* of local stone, with Bath-stone dressings ; some of the windows, font, and bells from the old church. *Whittington*, Northwold, Norfolk ; erected and endowed at the cost of Mrs. Norman, widow of the late rector of Northwold ; nave and chancel ; of flint and stone ; architect, Mr. R. M. Phipson. St. George, *Walsall ;* of local stone, the interior faced with bricks ; the tower and spire (which is to be 165 feet high) are left for completion at a future day ; cost about 7,000*l.* ; the site was given by Lord Hatherton ; architect, Mr. R. Griffiths, of Stafford. St. Giles, *Cambridge ;* of white brick, with Doulton-stone dressings ; tower and spire left for erection when funds are obtained ; 900 sittings, cost about 8,000*l.* ; architects, Messrs. Healey, of Bradford. St. Stephen, *Eastwood*, Rotherham ; tower unbuilt ; cost about 3,000*l.* St. Michael, *Dawlish*, South Devon ; cost 6,000*l.* St. Peter, *Bishop Auckland ;* 550 sittings, cost 7,000*l.* ; architects, Messrs. Austin and Johnson, of Newcastle. Holy Trinity, *Dinting*, Derbyshire ; cruciform, with apsidal chancel, and tower and spire 137 feet high, in which is a peal of six bells ; 450 seats, cost 6,500*l.* ; architects, Messrs. Mills and Murgatroyd. St.

Matthew, *Grosmont*, Lythe, North Riding of Yorkshire; of local stone, with some peculiarities in the interior, chiefly intended to improve the acoustic character; elaborate hammer-beam roof, with curved ribs; lofty chancel arch, sacrarium with sedilia and piscina; windows of painted glass; architects, Messrs. Armfield and Bottomley, of Whitby. St. Luke, *Prestonville*, Brighton. *Ullenhall*, near Stratford-on-Avon, Warwickshire. The parish church of *Grafton-Flyford*, near Pershore, Worcester; rebuilt, except the tower, from the designs of Mr. W. J. Hopkins, of Worcester.

Church restoration continues its triumphant career, and, doubtless, will continue it till every old church in the kingdom has been restored, renovated, or transformed. Even then it will go on, for, as has happened already in many instances, when twenty or thirty years have passed, it will be found that the old restoration was not sufficiently thorough, or was not conducted on right principles, or, in some respect or other, was insufficient or unsatisfactory, and that a new restoration or transformation is desirable, and indeed, out of regard for the fabric itself, unavoidable.

Being thus universal, we may again confine our notes on restorations to those completed or in progress at the cathedrals. The restoration of the south transept of York Minster has been so far finished that the transept has been reopened. Under the direction of Mr. G. E. Street, R.A., the process has been thorough. The clerestorey walls have been solidly rebuilt, and new Purbeck marble shafts inserted throughout. The roof has been remodelled, and raised to its original height, and an oak ceiling substituted for the former one of plaster; and the interior made resplendent with colour, gilding, and bright fittings. Other works are now in progress. The expenditure, thus far, has been about 20,000*l*.

Mr. Street has also carried well forward the rebuilding of the nave of Bristol Cathedral, commenced eight years ago. About 42,000*l*. have been expended. It is now hoped that the nave may be available for Divine Service in the summer of 1876. A great deal will, however, then remain to be accomplished, and probably some years be required for its completion; but the Bristolians have worthily completed Redcliffe Church, and will, no doubt, as worthily complete their cathedral.

The restored choir of Rochester Cathedral has, under the superintendence of Sir Gilbert Scott, been completed, and the cathedral reopened. The interior is now finished, but much remains to be done to the exterior. The expenditure so far has exceeded 12,000*l*. At Salisbury, the restoration of the Lady chapel and stone work of the choir has been completed; pavements of encaustic tiles have been laid; the large tombs of Bishops Bingham and William of York renovated, and other works executed. The renovation of the sculpture on the west front is being carried steadily forward by Mr. Redfern; the cost of restoring the west front will probably exceed 10,000*l*. Thus far

the total expenditure has been about 34,000*l.* The works at Ely Cathedral have for the present been brought to a close, with the completion of the restored octagon and lantern, and their decoration by Mr. Gambier Parry; but it is now proposed to complete the external stonework of the lantern; and Sir Gilbert Scott strongly urges the necessity for restoring the west front without delay, and rebuilding the north-west transept; the cost would be about 28,000*l.* Mr. Redfern is engaged in completing the statues of the Apostles for the octagon.

Sir Gilbert Scott has completed the restoration of the cathedral of St. Asaph. The works, which have been for some years in progress, have involved an outlay of about 10,000*l.*, and have been carried out on the whole satisfactorily.

The works at Durham Cathedral are being vigorously prosecuted, under the guidance of Sir Gilbert Scott. The transformation of the choir will be complete, and there will evidently be great changes elsewhere. How far the restorations and embellishments will mar the stern grandeur of this most majestic of our Norman churches we are unable to say, but we earnestly hope that the warnings of those who have been so strongly protesting against the works in progress may not prove prophetic. At Carlisle, the chief innovation is the introduction of a reredos of Mansfield stone, alabaster, Purbeck, Sicilian, and rosso-antico marbles, Venetian mosaics, a floreated central cross, and statuettes of winged angels—with all deference to the designer, Mr. G. E. Street, R.A., intensely ugly, and only explicable on the supposition that, concealed within it is some profound esoteric ecclesiastical symbolism.

At Winchester Cathedral, a stately oak screen, designed by Sir Gilbert Scott, has been erected. At Norwich Cathedral, the restoration of the west front has been undertaken; and at Lichfield the restoration of the west front, a work that would probably require some 25,000*l.* to carry out in a proper manner, though not undertaken, has been agitated, and there is reason to believe will be shortly commenced under the direction of the universal restorer, Sir Gilbert Scott.

The works at Bath Abbey Church have at length been brought to a close. The great feature has been the construction of a groined roof, of late Third Pointed character, with ribs and pendant bosses, corresponding with the roofs in the chancel and transepts, in place of the old dilapidated wooden roof. Substantial open benches, with carved ends, have been substituted for the old pews; and several painted windows inserted. The cost has been about 30,000*l.*; the architect, Sir Gilbert Scott. Sir Gilbert is also proceeding steadily with the restoration of a still more famous abbey church, St. Albans. Hitherto the works have been confined to the tower and east end, and these have been executed in a most careful and complete manner. But now that the old church is to become the cathedral of the new bishopric named after it, the restoration of the Lady Chapel and its reunion with the church have been undertaken, and it is felt

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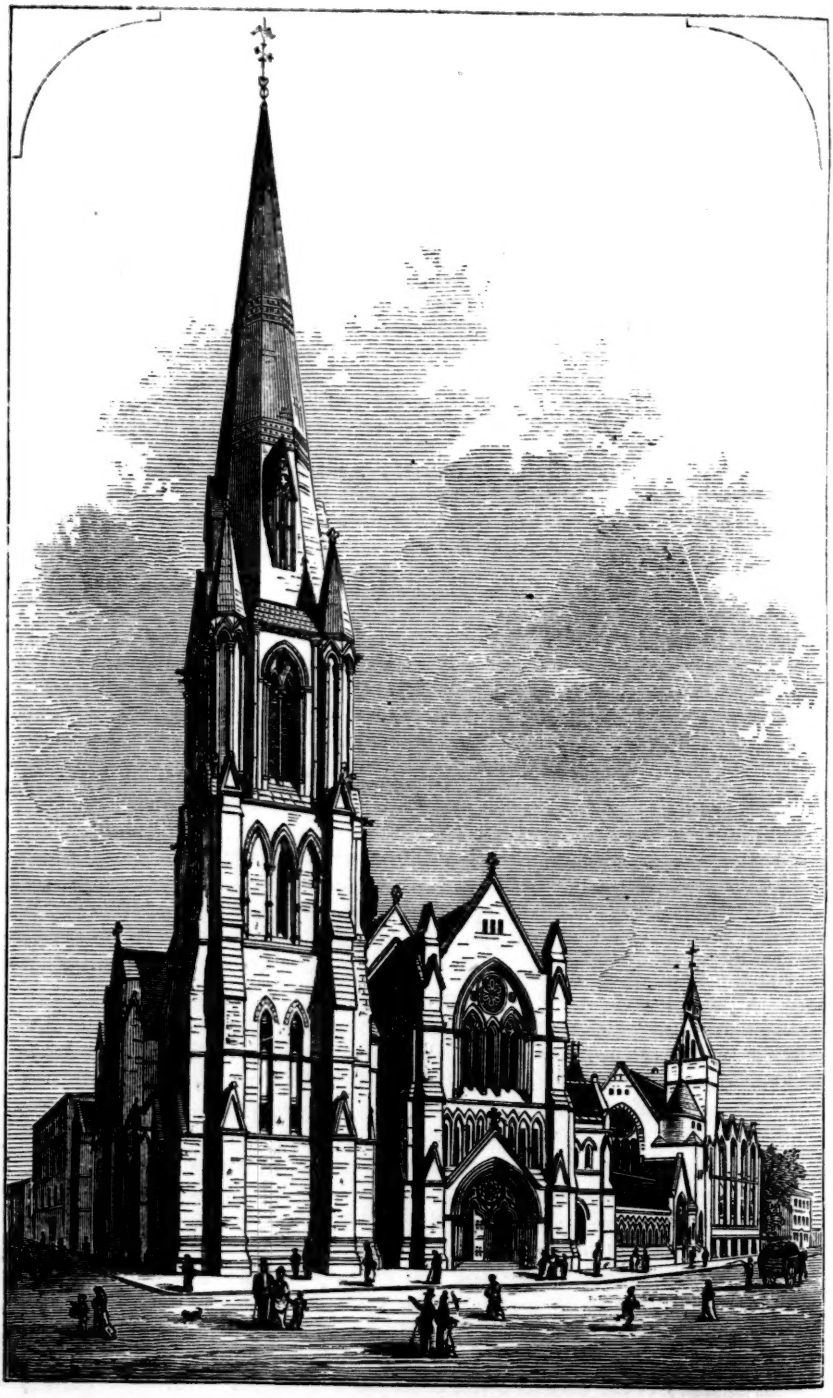


Christ Church, Westminster Bridge Road.

that the nave must not be left in its present forlorn condition. How far what is called restoration shall be carried, and what will be superadded in the way of decoration, will depend probably on the amount of subscriptions obtained, and even more, perhaps, on the kind of interest that may be aroused when the conversion of the church into a cathedral becomes a practical and pressing question. We can only deprecate too sweeping a transformation: in many respects the church is unique in archæological interest.

The most sweeping and the most gorgeous transformation of our time, that of the Wolsey Chapel, Windsor, into the Albert Memorial Chapel, has very nearly been effected by the same architect. It has been ten years in hand, the outlay has been unlimited, the materials of the costliest kind, and the artists and artificers men at the head of their respective callings. The building is resplendent with the work of the sculptor, mosaicist, glass and wall painter, gilder, and decorator; and if not the most beautiful, is certainly the most splendid work of the kind recently undertaken in this country.

We have selected for our illustration a dissenting chapel, Christ Church, Westminster Bridge Road, as at once the most striking novelty in ecclesiastical architecture, and at the same time showing the progress and marking the direction of church builders outside the Establishment. Christ Church is intended to supply the place of the Surrey Road Tabernacle, opened in 1783 by the Rev. Rowland Hill, and long occupied by that eccentric and popular divine. The new church, with its associated buildings occupies the triangular piece of ground on which till lately stood the Female Orphan Asylum. Besides the church, there are large schools and class rooms, a lecture hall for 800 people, chapel house, &c. The church occupies the Westminster Bridge Road frontage, and part of that towards the Kennington Road, the other buildings the remainder; and the Lincoln Tower, a nearly detached tower and stone spire, which will, when completed, rise to a height of 220 feet, stands at the angle where the two roads meet. The roof of the central octagon of the church rises from a series of eight gables, and is crowned by a wooden lantern fliche, 140 feet high. The buildings are of Kentish rag, faced with Portland stone; the church of a freely treated First Pointed type; the other buildings early Domestic Gothic. Together they form a striking and, from several points of view, picturesque group. The general external character will be seen from the engraving—taken from a drawing for which we are indebted to the courtesy of the architects, Messrs. Paull and Bickerdyke—but we may point out, as noteworthy features, the elaborate and very effective porch and the Lincoln Tower, so named in honour of Abraham Lincoln, the late President of the United States, and intended "as an international memorial of the abolition of slavery," half of its estimated cost having been subscribed in America.

But noteworthy as are the buildings as an architectural group,

the main interest is in the form and internal arrangements of the church. The problem which the architects had to solve was how to build a church for a congregation of 2,000, to bring the preacher and people into as close contiguity as possible, so that all might see and hear without inconvenience, and at the same time to preserve the ecclesiastical character of the edifice. The plan adopted was to make the church cruciform, the centre being an octagon, 55 feet in diameter, an adaptation of the octagon of Ely Cathedral, with four arms, the longest, forming the nave, terminating in a vestibule entrance towards Westminster Road ; two short ones serving as transepts ; the other, the choir, having an apsidal termination. The octagon is, with the eastern termination, the grand feature of the interior, and will, doubtless, when filled with worshippers, have a very imposing appearance. The main piers and arches which carry the roof are of white Mansfield stone on bases of black Tenby marble ; and each pier has detached shafts of Purbeck marble carried up to the capitals. The roof, a somewhat complex but mechanically admirable construction, will have moulded wooden ribs and a groined ceiling ; the height to the central boss being 70 feet. The choir is reached by a flight of marble steps, the floor being some five feet above that of the octagon. In the centre is placed the communion table, and behind it, against the wall of the apse, are stalls for the elders of the church, that in the centre, marked out by a canopy, for the presbyter. On one side is the organ chamber, on the other the choir gallery. The pulpit, placed against a main pier on one side of the choir, is an elaborate structure. In a corresponding position is the reading-desk. Between them is a lectern. In the transepts, and over the vestibule, are galleries set back six feet, so as to be clear of the piers, and so finished to accord with the architecture. The windows in the apse and transepts have painted glass. The total cost will, it is said, be about 45,000*l.*

Other Congregational churches must receive but brief notice. One of interest, from its associations, is the Cowper Church, at *East Dereham*, Norfolk, built on the site of the house in which the poet Cowper resided. The vestry has been fitted with the doors and panelling of the room in which Cowper lived ; and a granite monument, bearing an inscription written for it by the Dean of Westminster, has been erected in front of the church. At *Whitehaven*, a large Gothic church, with a tower 110 feet high, has been built at a cost of about 9,000*l.* from the designs of Mr. T. L. Banks. Old Kent Road, *Southsea*, a First Pointed cruciform church, for a congregation of 600 ; erected from the designs of Mr. W. J. Stent, at a cost of about 4,800*l.* Others have been erected. At *Chester*, a good early Second Pointed building, with an octagonal tower and spire ; architect, Mr. T. M. Lockwood. At *Caterham*, Surrey, a late First Pointed cruciform building, with a tall campanile on right of entrance. At *Wellingborough*, a spacious building, in plan a Maltese cross,

of stone, First Pointed in style, cost 9,000*l.*; architect, Mr. E. Sharman. At *Beaconsfield*, and elsewhere.

During the year ending August, 1875, the Wesleyan Methodists had erected 74 chapels, at a cost of about a quarter of a million, and sanctioned the erection of 122. During the past twenty years, somewhat over 2,000 chapels have been built, and the total number of places of worship in Great Britain belonging to the Wesleyan Methodists is somewhat over 7,500, providing 1,725,000 sittings. The new chapels include the Hannah Memorial Chapel at *Lincoln*, an Italian classic structure, with hexastyle Corinthian portico; erected from the designs of Messrs. Bellamy and Hardy, for a congregation of 1,000. The Bainbridge Memorial Chapel, *Newcastle-upon-Tyne*, an early Second Pointed building, designed by Mr. T. Oliver. At *Henshaw*, near Gateshead, Italian classic, with Corinthian portico: 800 sittings, cost 6,000*l.*; architect, Mr. F. R. N. Haswell, of North Shields. At *Leeds*, First Pointed, designed by Messrs. Hill and Swann for a congregation of 600; *Wolverhampton*, Messrs. Loxton, architects; *Tarvin*, Gothic, architect, Mr. Wills; *Macclesfield*, Gothic, with tower and spire 130 feet high, cost 8,000*l.*, architect, Mr. C. O. Ellison; *Bingley*, cost 12,000*l.*; Trinity Church, Albert Park, *Abingdon*, Gothic, architect, Mr. W. H. Woodman; *Eston-in-Cleveland*, Yorkshire, cost 9,000*l.*, architect, Mr. E. Taylor; *Dorchester*, Italian, cost 3,000*l.*, architect, Mr. W. S. Allardyce; *Low Spennymoor*; *Halton*, and many other places. The Calvinistic and other sections of Methodists have also been busy in church building.

The Baptists appear less active in this line than the other leading sects, but they build on an average thirty chapels yearly. They have this year built chapels at *Bridlington Quay*, Early Second Pointed in style, architect, Mr. S. Musgrove; at *Cambridge*, *Norwich*, *Brearley*, and elsewhere. The Presbyterians, besides transforming the dingy old chapel in George Street, Bryanstone Square, into a smart new orthodox Gothic steeple-house, have built chapels at Norwich, at Smethwick, and several other places. The Unitarians have also built half a dozen new chapels; and the Irvingites a spacious one at Hackney.

The Roman Catholics have opened a new church at Canterbury, dedicated to the local saint, Thomas à Becket. It was designed by Mr. J. G. Hall, the City surveyor, and cost 3,000*l.* Churches have also been erected at Chester, dedicated to St. Francis of Assissi, architect, Mr. J. O'Byrne; at Bournemouth, a Gothic building for a congregation of 400, designed by Mr. J. Clutton; St. Peter's, Shoreham, erected at the cost of the Dowager Duchess of Norfolk from the designs of Mr. C. A. Buckler; Havant, designed by Mr. J. Crawley; at Birkenhead, dedicated to St. Lawrence; and elsewhere.

4. Buildings for Public Purposes.

The busy town of Todmorden has received an important

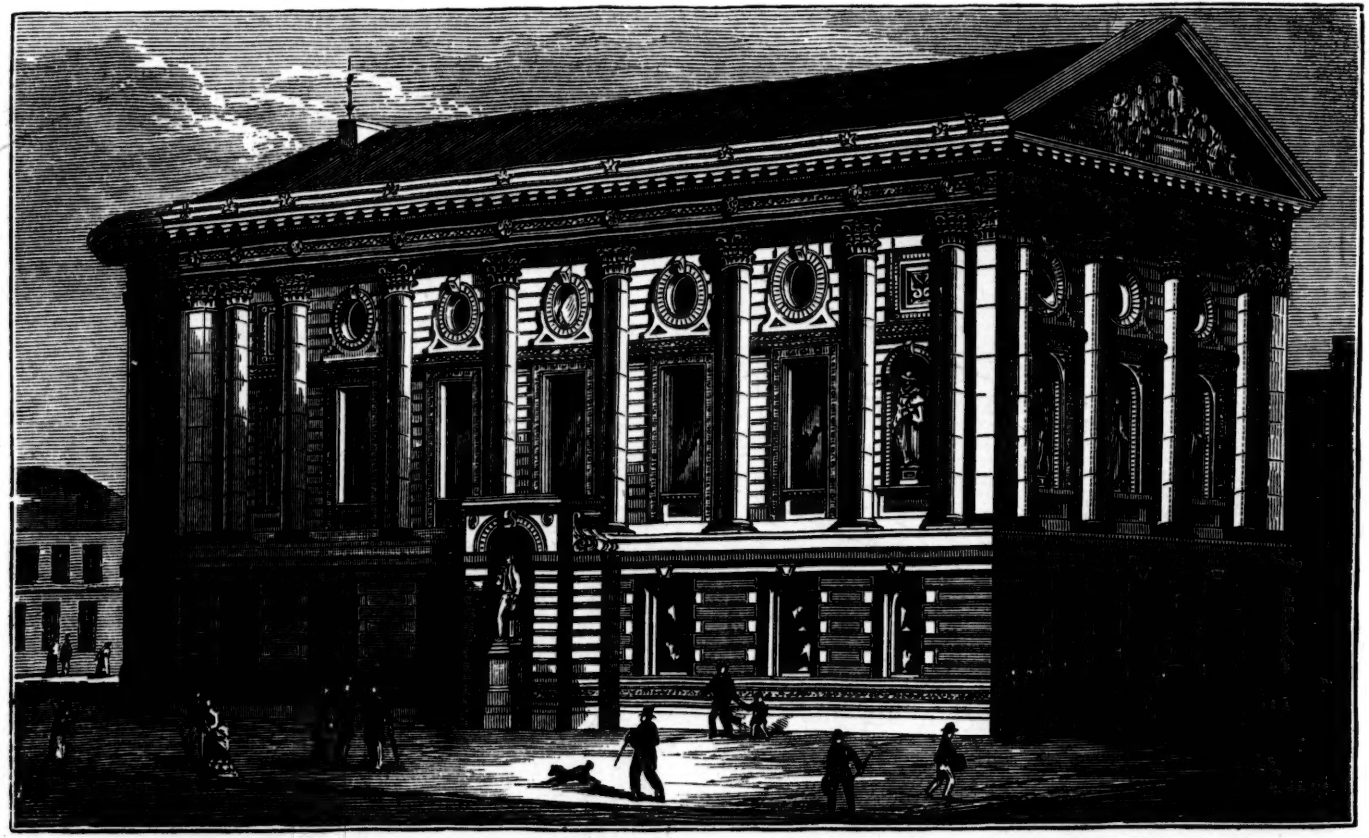
addition to its architecture in the costly Town Hall presented to it by the sons of the late John Fielden, M.P., whose memorial, a bronze statue by Foley, stands in front of the new Town Hall, and was unveiled on the same day (April 3, 1875,) on which the Town Hall was opened.

Todmorden Town Hall is a chaste and carefully finished Greek building, the order Corinthian. The ground floor is rusticated, and contains a market place, local court-room, municipal offices, &c. The main storey contains the great hall. It has a noble portico, tetrastyle-in-antis, with sculptured groups in the pediment, illustrating the manufactures of the district, and columns of equal height are carried round the building, plain three-quarter engaged on the sides, fluted and detached round the semi-circular end, in which are the entrance hall and grand staircase. The great hall, or assembly room, is a very handsome room, 96 feet 9 inches long, 44 feet 6 inches wide, and 34 feet high, covered with a coved ceiling, enriched with bas-reliefs and lavishly decorated in gold and colour. The general character of the exterior is very well shown in the engraving, though the smallness of the scale precludes justice being done to the refinement of the finish. The architect was Mr. John Gibson.

A group of public buildings, including a Town Hall, Market Hall, Free Library, and Baths, designed by different architects, was opened in August last at West Bromwich. The Town Hall is of red brick, with terra-cotta mouldings, cornices, &c.; of a style described as Continental Gothic freely treated, and has a massive angle tower 130 feet high. The great hall, the chief feature of the building, is 81 feet by 48, and handsomely fitted. The architects were Messrs. Alexander and Henman, of Stockton-on-Tees. The Free Library, News Room, and Market Hall, Continental Gothic in style externally, the hall 150 feet by 90, was designed by Messrs. Weller and Proud, of Wolverhampton; and the Baths by Mr. Pincher, of West Bromwich. The cost was over 40,000*l*. At Dunstable a spacious building has been erected to serve as Town Hall, Straw Plait Market, and Corn Exchange, from the designs of Mr. Henry Elliott. At Bournemouth a new Town Hall has been completed; the Victoria Public Hall, Carlisle, has been opened; and the Rhyl Town Hall and Corn Exchange is advancing.

Mr. Waterhouse's magnificent work, the Manchester Town Hall, is making steady progress, and bids fair to be the finest municipal building in the kingdom. The Manchester Exchange has been opened, and is a noticeable building, but in many respects far from satisfactory. The internal arrangements appear to be admirable.

The Royal Exchange, Leeds, designed by Mr. Waterhouse, of which the first stone was laid by the Duke of Connaught in September, 1873, has been opened. It is a handsome perpendicular building, well planned and the details very carefully executed, but hardly as important as the trade of the town and



Todmorden Hall.

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the scale of the Town Hall and other public buildings would seem to require; but it is the work of a private company, and its size has no doubt been regulated by economical considerations. A new Exchange has been opened at Hanley; and at Reading Municipal Buildings on an extensive scale have been commenced.

The Corporation of London have two great works approaching completion—the new Billingsgate Market and the Metropolitan Poultry Market. Billingsgate Market stands on the site of the old Fish Market, but will occupy a somewhat larger area, in all about 40,000 superficial feet, and the space will be better economised. The basement, groined and vaulted, and well-lighted, with a clear height of 24 feet, and reached by stone staircases from the river and Thames Street fronts, will be appropriated to the Shell Fish Market. Above this will be the General Fish Market on the Thames Street level. This market will be covered with a louvre glass roof, 43 feet high to the ridge, carried on lattice girders of 60 feet span, which will be supported by iron columns 31 feet high. A gallery about 30 feet wide, with an area of 4,000 superficial feet, runs north and south above the general market, and will be used as a market for dried fish. The building will be Italian in character; of Portland stone on a red granite plinth, with stock brick facings between the upper windows. The river front presents a handsome arcade of eleven bays, with a central pediment, and is flanked by two large taverns, corresponding in style, and adding much to the importance of the design. The Thames Street Front, with differences of detail, is similar in character. The architect is Mr. Horace Jones.

The Metropolitan Poultry Market, now nearly finished, stands immediately west of the Meat Market (described and engraved in the "Companion" for 1869, pp. 227–29), which, with some differences in detail, it closely resembles, and with which it will when finished be incorporated under the general title of the London Central Market. The new market covers an area of 49,000 superficial feet; is divided by four avenues running east and west, and as many running north and south, and will have entrances from Farringdon Road, Charterhouse Street, and the Meat Market. Mr. Horace Jones, who designed the Meat Market, is also the architect of this.

Public Halls have been erected at Southport, at Ripley, at New Cross, and in various other places. St. Pancras has built a spacious and convenient Vestry Hall, not overlaid with ornament. Offices for Local Boards have been built at Lewisham (a very ecclesiastical looking Gothic edifice) and elsewhere; Police Courts at Marylebone, and at Newcastle-on-Tyne; and a variety of other structures for different local authorities, and in almost every instance with more or less regard to architectural character.

In Leicester Square a large Domestic Gothic building has been erected as a Dental Hospital. Operating rooms are on the

ground and upper floors; on the first floor is a large room for meetings of the Odontological Society; on the second storey are class rooms, museum, and library. The Hospital for Sick Children, in Great Ormond Street, the first stone of which was laid by the Princess of Wales in 1872, has been partially opened. The building, designed by Mr. E. M. Barry, R.A., of brick decorated with terra-cotta and flanked by octagonal turrets, has externally a wholesome, cheerful, and appropriate aspect, and internally an equally appropriate air of comfort, cleanliness, and thoughtful arrangement. There are wards in which are several beds for the children, others in which only one child can lie; the walls, ceiling, and floor are impermeable to moisture, and can be kept clean without scrubbing. Ventilation is well-considered, and the appliances are excellent. It is an admirable institution, thoroughly appreciated by the classes for whom it is intended, and well administered, and yet funds are wanting for the proper completion of this building. Opposite the entrance an elegant little chapel, the inner walls faced with alabaster, the columns of alabaster and marble, has been built at the cost of an anonymous benefactor.

An Asylum for the Deaf and Dumb at Margate—a branch of the larger establishment in the Old Kent Road, London—was opened by the Prince and Princess of Wales last July. The building, of the ordinary Gothic type, has externally little of the suggestive fitness of character and cheerfulness of aspect which distinguishes the Ormond Street building, but the interior is said to be well adapted to its purpose. It stands on an elevated and healthy site just outside the town; has accommodation for 150 children, and cost about 10,000*l*. The architects were Messrs. Drewe and Bower, of Margate.

The Prince and Princess of Wales have also opened the Metropolitan Convalescent Home for Children, on Kingston Hill, Surrey. Admirably situated, and skilfully and judiciously arranged and fitted, the building would be excellently fitted for its purpose, but for its needlessly austere exterior. It is amazing that the benevolent folk who manage such institutions do not observe the beneficial effects which a cheerful-looking house and cheerful surroundings have on sick and convalescent children. Even such balconies as are provided at Ormond Street, where the children can run out, or if too ill for that, can be carried, to sun themselves and look across green fields, or busy ways, have an exhilarating influence. The building at Kingston Hill provides accommodation for about 150 children—an equal number of each sex.

A Convalescent Hospital has been erected at Ilkley: a Fever Hospital at Darlington; an Idiot Asylum for the Midland Counties at Knowle; a Central London Sick Asylum, in Cleveland Street, Fitzroy Square; and similar institutions in other parts of the country. The magnificent Sanatorium in course of erection by Mr. Holloway, near Virginia Water, is not sufficiently advanced for description here.

5. Buildings Connected with Education, Art, &c.

No work of importance has been completed in either of our universites, but the restorer is busy in both. At Oxford, the only extensive work in progress for the University, as distinguished from the Colleges, is the New Observatory described below, but a Committee of Council appointed to consider the requirements of the University has reported that an outlay of 108,950*l.* is needed for the erection of new and the extension of existing buildings, including the Library, Ashmole's Museum, University Museum, Schools, &c., so that the architect and builder are not likely to be unemployed in the coming years. At Christ Church College the works on hand, include a remodelling of the Tom Quadrangle, and a recasing of the basement, or what is supposed to be the basement, of Wolsey's original cloisters preparatory as some hope, but as we believe is not yet decided, to the rebuilding of the cloisters. That this would add to the beauty of the old familiar quad. is by no means certain. In the Cathedral a new wrought iron screen to separate the chancel from the nave, and a new lectern designed by Sir Gilbert Scott have been added. At All Souls the reredos has been most elaborately restored. At Merton the chief work has been the restoration (really the refacing) of the west front of St. John's Tower. At Balliol, Mr. A. Waterhouse has been carrying out his extensive additions and renovations. At New College, Sir Gilbert Scott has nearly completed the new Holywell Street wing, and further extension has been undertaken. At Keble, the chief work is the new chapel by Mr. Butterfield, which will agree in architectural character with the other college buildings, and if not beautiful will at least be rich.

Outside the colleges the most important work is the New Observatory, which is in course of erection in the Parks behind the Museum, from the designs of Mr. Chas. Barry. It will be a large Italian building of Suffolk brick and stone, the main front flanked by two towers,—the Savilian, or Western Tower, to contain the great equatorial now being constructed for the University by Mr. Grubb, of Dublin, and the Eastern, or De la Rue Tower, to contain the great telescope and other instruments presented to the University by Mr. De la Rue.

At Cambridge, Mr. Waterhouse is busy with the transformation of Pembroke. A new Master's House is completed. The famous old Hall has been demolished and a new one is fast rising in its stead. The whole aspect of the great quadrangle is being changed. One side has been rebuilt in red brick and stone. A new Library will occupy another side. There are many murmers among the old collegians and Cambridge men generally, at the new buildings. They diverge too far, it is said from the old buildings. The *genius loci* should have been propitiated. If new buildings must be erected, they might at least be made like the old. For our part we do not share in these feelings. If new buildings must be erected, it may be well to regard the

existing structures, but certainly not to copy them with servility. The new buildings should be not such as were thought best when the old ones were built, but the best that can be produced now—the most beautiful and the most convenient. At St. Catherine's a new Master's Lodge has been completed from the designs of Mr. W. M. Fawcett. Magdalen has been improved in appearance by renovation, and shown to greater advantage by the removal of several neighbouring houses. The principal front of Queen's has also undergone the process of renovation. At Jesus, extensive works are in progress, and preparations are making for lengthening the hall. The new wing which is being added to Downing College is approaching completion. At Trinity the principal work has been the decoration of the chapel which has been entrusted to Messrs. Heaton and Butler, the glass painters, who have not spared gold and bright colours. West's painting has been relegated to the library staircase. The hall of Christ's College is to have a new roof. For King's, Mr. Armstead is modelling a statue of the founder. Other work hardly needs chronicling.

Turning to the Public Schools we may note the opening at Harrow, of a spacious Gymnasium (78 feet by 44 feet), and of the Natural Science Schools and Laboratories. Both buildings are Gothic, of a French type, and are built of stock brick with courses of red and white bricks and stone dressings. The architect was Mr. C. F. Hayward, F.S.A.; who has also completed, for a private company, the Harrow Public Hall. Close to the Science Schools a new Speech Room, for Harrow, is in course of erection, from the designs of Mr. Burges. It is intended to harmonize in style with the College Chapel on the opposite side of the road.

The Merchant Taylors' Schools now occupy the site of the old Charterhouse Schools, Charterhouse Square, which have been as far as possible utilized. For the New Buildings, which were opened by the Prince of Wales in April last, the old Gown Boys' Hall and Writing School were removed, with the northern half of the cloisters and that portion of the Head Master's House, in which the boarders resided. The principal front of the New Buildings faces the Upper Green, is of red brick and Portland stone, and is a handsome and characteristic example of Collegiate Gothic, due emphasis being given to the first floor, which contains the Great Hall. On the ground floor is a spacious central entrance hall, with a large school-room on each side. On the upper floor is the Great Hall, 93 feet by 50 feet, with a well-designed open timber hammer-beam roof—a noble room, worthy one of the best of our secondary public schools and of the munificent company whose name it bears. Besides these there are new class rooms, a lecture theatre, &c., light, commodious and admirably ventilated. The architect was Mr. Edward I'Anson, F.S.A.

At Westward Ho, North Devon, has been opened the United Service College, for imparting a superior education to the sons of officers of the army and navy. The buildings are an adaptation of some erected, we believe, for an hotel and private board-

ing establishment, with the addition of a new chapel. Accommodation is provided for 200 boys besides masters and staff.

A Roman Catholic College has been formally opened at Kensington, by Cardinal Manning, but the building is not of architectural consequence.

A new School for St. Paul's Cathedral Choir has been erected in Carter Lane, Doctors' Commons, from the designs of F. C. Penrose. The building, about 150 feet long and 40 feet deep, is an elegant seventeenth-century renaissance structure, of two storeys somewhat overweighted by a heavy sloping roof in which are two tiers of ornamented dormer windows. The body of the building is of brick and terra-cotta with sgraffito inscriptions and ornamentation.

The Board Schools have become too numerous to particularize. Several of the new ones in and around London, and also in the country, are pleasing in appearance ; most of them are well built, and all show a laudable desire to provide light, healthy, and convenient school and class rooms.

A Public Library and School of Science and Art, was opened at the end of 1874, by the Earl of Verulam at Watford, Herts. The ground floor is appropriated to the library and institute, the first floor to the schools. The building of brick and stone, Domestic Gothic in style, was designed by Messrs. Sedgwick, of Watford. A spacious Free Library and Museum has been erected at the cost of Mr. J. Rankin, of Bryngwyn, and presented to the city of Hereford. The building, a handsome structure, of three storeys, of brick and stone, Venetian Gothic in style, designed by Mr. F. Kempson, contains besides the rooms for the museum and library, commodious reading, class, and club rooms, librarian and curator's residence, &c. A Museum and Library, a Gothic brick building designed by Mr. D. Walker, has been opened at Welshpool; and at Torquay, one of more architectural pretension, a two-storey stone building, Venetian Gothic in style, designed by Mr. Harvey.

Enough, probably, was said last year of the second Alexandra Palace, and it will be sufficient here to record its opening. The building is in the main on the lines of its predecessor, but from the walls being continued, instead of broken by transepts, the area included is much larger. The building appears to be substantial, the internal arrangement, simple and easily understood ; but the exterior is unnecessarily and beyond precedent ugly. The great concert room is an imposing, and, allowing for errors of taste in the decoration—due perhaps to excessive hurry—and always excluding from suspicion of commendation the detestable effigies of the sovereigns and similar vulgarities—a good room. But both here and in the theatre the absurdity is committed of making the floor level so that persons in the middle and back of the room can with difficulty see, and unhappily few can hear anything of what passes on the stage or platform. However there are extensive grounds to wander in, and the Grove is charming. Of the proposed National Opera House on the

Thames Embankment, of which Madame Titiens lately laid the first brick, it will be time to speak another year.

A new Theatre has been opened at Bradford, but the only novelty observable is its combination with a Music Hall. The architects were Messrs. Jackson and Longley, of Bradford. Masonic Halls have been opened at Liverpool, Derby, Camberwell, and elsewhere.

Great progress has been made with the new Aquarium and Winter Garden, Westminster. It is an immense structure, having a frontage towards Tothill Street of nearly 600 feet, with a width, for the greater part, of 160 feet. The outer walls are of red brick and Bath and Portland stone, with a good deal of carved work, in scrolls, dolphins, &c.; the style, a modification of the prevalent Queen Anne's. It is divided into a fore-building with two towers, at the east end, 140 feet long and 85 feet wide, in which will be table, marine, and fresh-water tanks; and a garden and promenade, 350 feet long, 160 wide, and 72 feet to the centre of the semicircular glazed roof. All round the building will be galleries, 40 feet wide, appropriated to refreshment buffets, exhibitions of works of art, &c. Under the galleries, in the promenade garden, will be the tanks for the larger sea and river animals. Besides these, there will be a great orchestra, a concert hall, with an auditory for 2,000 persons, dining rooms, reading rooms, &c. The architect is Mr. A. Bedborough.

6. Street Architecture.

Two or three years ago we noticed the erection of a new Hall for the Curriers' Company. It was not altogether satisfactory, and a commercial firm desired the site. It was therefore sold and demolished almost as soon as completed, and a new and more costly Hall has been erected on the site of the company's original hall in London Wall, near Wood Street. The new hall is of Bath-stone, the style a variety of secular Gothic; has a tall turret at the eastern end, and, at the western a clock tower. Over the principal entrance are the arms of the company, carved in bold relief. The dining hall, the chief room in the building, is 40 feet long and 21 wide, with an elaborate groined ceiling, is very richly fitted, and approached by an oaken staircase of stately proportions. A large part of the building is devoted to offices. Messrs. J. and J. Belcher were the architects.

A handsome addition has been made to the palaces of Pall Mall and to the clubs of London, in the Junior Naval and Military Club, close to the entrance to Marlborough House. It is a narrow but very lofty edifice, French Renaissance in style, displaying on each storey a great deal of florid carving, and terminating in a great central dormer, surmounted with colossal figures of Mars and Neptune. The striking feature of the façade is the lofty semicircular entrance, with richly carved dome. The interior vies in splendour with the chief clubs, and has a greater profusion of sculpture and florid ornamentation than most. The

architect was Mr. T. Dudley. The Club House, so well-known as Crockford's, after undergoing many mutations, has been re-converted, under the direction of Mr. Phipps, into a Club House, the New Liberal, but the architectural changes, though considerable, are not of sufficient importance to require description here. The opening of St. Stephen's Club has already been mentioned. In its finished state, the exterior has a heavy and uninviting aspect, interferes seriously with the view of the Houses of Parliament from the Thames Embankment, and is entirely discordant with their architectural character.

The new Terminus of the Great Eastern Railway, Liverpool Street, Bishopsgate, is the largest station in London, having an area of ten acres, and a length of 2,000 feet. The building, designed by the company's engineer, Mr. Edward Wilson, is of white brick and stone, early Domestic Gothic in style. The east and west fronts are each 320 feet long, with projecting centre and ends 94 feet high, the rest of the frontage being 67 feet. At the north-west angle of the principal front is a tower and spire, 150 feet high. The leading features of this front are the arcade, of 24 lofty arches, with plate tracery in the heads, the tower, and the central gables of rather discordant design. The booking office, the chief room in the building, is 90 feet long, 50 wide, and 49 feet high ; light, cheerful, and handsome ; a great contrast to the dark and dirty looking office of the old Shoreditch terminus. The station area, which contains ten platforms, is covered by a roof of two bays, of 109 feet span, and two side roofs, each of 30 feet span. The length of the roof is 730 feet over the main line, 450 feet over the local department. The girders which support the roofs are borne on hollow iron columns, which carry away the rain-water. The new building is intended, not for traffic alone, but to serve as the company's head-quarters, and for the transaction of all its ordinary business.

Facing the terminus of the Great Eastern Railway and that of the North London Railway, is the new chief station of the Metropolitan line. Less pretentious than its neighbours, it has a substantial, business-like aspect, and the internal arrangements seem well devised and convenient. The building is of white brick and stone, lofty, with ornamental Mansard roofs. Like the Great Eastern terminus, it was designed by Mr. E. Wilson. The new Goods Station of the Great Northern Railway, in the Farringdon Road, will hardly arrest the passenger by its æsthetic merits, but is remarkable for its extent, solidity, costliness, and the completeness of its hydraulic apparatus and other mechanical appliances. It will be 310 feet long, and vary in width from 92 feet at one end to 42 at the other. The floors are fire-proof, being formed of corrugated iron plates, covered with concrete, and faced with asphalt. The works were designed by the company's engineer, Mr. R. Johnson, C.E.

Building is proceeding along the Holborn Viaduct, and some additional houses are rising in Farringdon Road, but no very

novel work has been produced. Ludgate Circus is being gradually completed, and generally the houses have a certain congruity, but it is a pity that this was not more thoroughly carried out; the Circus would then have formed a striking feature in the chief city thoroughfare. The most important of the new buildings, at the Fleet Street angle, will be the chief office of the "Echo" newspaper. Messrs. Collinson's shop, opposite, is a careful and good piece of work, but too pedantically archaic for every day use. On the opposite side of the Circus, and lying for the most part out of sight, between Old Bailey and Fleet Lane, is the great range of offices constructed for Messrs. Cassell, Petter, and Galpin, from the designs of Mr. F. Chambers. This is one of the largest printing offices yet built, and perhaps the most complete in its arrangements. The machine-room is particularly noteworthy. It has an area of 12,600 feet, contains 36 large machines, which are worked by bands beneath the floor, and is lighted by a central well, 75 feet by 30, carried up to the top floor, and covered by a light glass roof. There are five floors above the basement. In Ludgate Street, a new building has been erected for the City Bank, from the designs of Messrs. Twining, as well as some shops and offices. The warehouse of Messrs. Keeling, and others, in Gresham Street, Basinghall Street, Coleman Street, and London Wall, have good business frontages.

More noteworthy, for its novelty, is the shop of Messrs. Delaterre, in the Poultry, in which an attempt is made to reproduce an old City shop, in brick and stone, timber being no longer admissible. The building is narrow, but lofty, having over the shop four storeys, with tall, sloping roof and dormers. Each floor has mullioned five-light windows, and between each floor is a long bas-relief, in a panel, representing famous royal processions through the City. The upper panel represents Edward VI on his way to the Tower in 1546, the lowermost Queen Victoria on her way to open the Royal Exchange, in 1844. Intermediate relievi, represent the processions of Queen Elizabeth and of Charles II. The panels are executed in red terra-cotta, the same colour as the bricks, and the effect, as a whole, is pleasing; but terra-cotta, in any case, is a bad material for an artistic bas-relief, and its unsuitableness is increased when the colour is a brick red. Still, the idea has in it some originality, and the architect is to be congratulated for having deviated, and, in a great measure successfully, from the beaten track.

Other new City buildings are too numerous even to name. In Queen Victoria Street several new and solid houses have been erected. The most noteworthy is the Safe Depository, near the Mansion House, less for its architecture, though that is at least respectable, than for the extraordinary strength and convenient arrangement of its fire and burglar proof vaults. Among the new offices in this street those of Messrs. Green and the Times' Chambers, are especially noticeable. About Austin Friars and

Old Broad Street some extensive offices have been built, of a superior character, and several in other parts of the City.

In Southwark, we may note the erection of large ranges of warehouses, in St. Thomas Street, in Weston Street, Southwark Street, and the Borough, and all with more or less effort after architectural character. In the Blackfriars Road, at the corner of Stamford Street, where for so many years the large, unoccupied and semi-ruinous houses stood a picture of dirt and misery, has been erected a very solid-looking Branch of the Central Bank of London, designed by Mr. Edwin Nash. At Newington Causeway a showy pile, 300 feet long, has been built, immediately east of Messrs. Tarn's warerooms.

Stepping westward, we notice the completion of the Offices of the Provident Institution, at the corner of Hemming's Row, St. Martin's Lane, a stately Italian Renaissance building, of Portland stone, designed by Mr. David Brandon. A little further, the old Water Colour Society have had a florid entrance constructed to their Gallery in Pall Mall. It is of Portland stone, with polished granite columns, coloured marbles, and some bold carving. The architect was Mr. F. P. Cockerell. St. James's Hall has had a new frontage towards Piccadilly, designed by Mr. Emden. It is 70 feet high, Venetian Gothic in style, and constructed of red brick and stone, with terra-cotta and mosaic ornamentation.

Among business houses we notice in taverns a tendency to the adoption of architectural character in re-building. A notable example may be seen in the Sunderland Arms, at the corner of Sackville Street, Piccadilly. The new house, though small, is a quiet and good design, which does credit to the taste and ingenuity of the architect, Mr. J. T. Wimperis, who has turned the narrow space at his disposal to the best account. The front is of Suffolk bricks and Portland stone, the wood work of oak, the pilasters of red and blue granite, the frieze of red Mansfield stone supporting a light open wrought iron balcony, while a low angle turret breaks the sky line. The internal fittings are equally characteristic, unobtrusive, and carefully finished. More pretentious is the Horse Shoe Hotel, Tottenham Court Road, the old tap-house to Meux's Brewery. This is of very pronounced renaissance character, of red brick, Portland stone, and red Mansfield stone, four storeys high, with very wide pilasters, heavy dormers, and a pedimented centre surmounted with a tall pavilion roof and terminal cresting. On the ground floor, besides the usual tavern accommodation, there are large grill, coffee, and smoking rooms; on the first floor spacious and elaborately ornamented dining rooms; above, the hotel apartments. The architect was Mr. E. L. Paraire.

Other buildings we had noted in Oxford Street, Henrietta Street, Goswell Road, Commercial Road, and elsewhere must be passed by; enough has been said to show the extent and character of current commercial architecture in the metropolis.

And we can only glance at the progress of street architecture in the country. At Manchester the Conservative Clnb House

is a stately Italian edifice of Yorkshire stone, with the principal front, an exceedingly rich façade of 68 feet, towards St. Ann's Street, and a frontage of 106 feet towards Cross Street, designed by Mr. R. Walker. At Altrincham the bank of Messrs. Brooks has been rebuilt in the favourite Queen Anne manner, but on the model of the old Cheshire black and white buildings, of which it is a very ornate example. The ground floor is of stone, the upper of oak framing filled in with plaster, and ornamented with pargetting. The banking room on the ground floor and principal room above it have each a semicircular window of great width. Between the two principal gables is a deep balcony, the recess allowing a striking play of light and shade. Altogether it is a very picturesque structure but a little toy-like. The architect was Mr. G. Truefitt. Banks have also been erected at Bradford—the District Bank, a classical Italian structure, of two orders, Tuscan below, Corinthian above, designed by Messrs. Milnes and Francis. At Exmouth, a branch of the West of England District Bank, a handsome building of local stone with Bath-stone dressings, designed by Mr. B. Gingell of Bristol. At York, an extensive enlargement of the York City and County Bank. At Peterborough, the Stamford, Spalding, and Peterborough Bank, a spacious building of Ancaster stone on a granite plinth, designed by Mr. Eve. At Newnham, Gloucestershire, a branch of the Gloucestershire Bank, a classical building of Bridgewater bricks with Bath-stone cornices and dressings, architects Messrs. Medland of Gloucester.

Mills, warehouses, offices, and shops of a noteworthy order have been built at Liverpool, Manchester, Birmingham, Leeds, Bradford, Sheffield, Barnsley, Bristol, Cardiff, and many other places, but we have no more space for this class of architecture. We must, however, note, before passing to the next section, the great expansion of our sea-side bathing places. Not only are most of the established towns being enlarged, and improved, and receiving additional attractions, but new ones are springing up all round our coasts. In Lancashire we have *St. Anne's-on-Sea*, between Lytham and Blackpool, which is being laid out on a regular and comprehensive plan, the houses Domestic Gothic, by Messrs. Maxwell and Tuke. In Kent, *Sheerness-upon-Sea* is making vigorous efforts to establish itself ; and *Westgate-on-Sea*, by Margate, has taken a new start and seems likely to hold its own against its mightier neighbour. *Clacton-on-Sea*, on the east coast, has also made good its standing, and has just added a new church to its other accommodations. The flourishing condition of *Saltburn-by-the-Sea*, has stimulated the formation of a rival on the Durham coast,—*Hardwick-by-the-Sea* (our sea-side builders, by the way, show a sad poverty of invention in their nomenclature) which is to have an imposing array of hotels, residences, shops, and parades, as yet, however, for the most part *in nubibus*.

7. Docks, Bridges, &c.

The important extension of Portsmouth Dockyard, commenced in 1866, is now virtually complete and ready for the formal opening. The dockyard has an area of 115 acres ; the area of the extension is 178 acres. The new docks and repairing basins have been excavated from the mudland left exposed at every tide, and enclosed and defended from the sea by walls of immense thickness constructed of Portland stone and granite. The entrance is 80 feet wide, with a depth of 2[illegible] feet 6 inches over the inverts at low water, thus allowing of the admission of the largest ironclads and their transfer to the repairing basins at any state of the tide. The works, which have been carried out under the direction of Mr. H. Wood, the Admiralty Engineer, have cost some two millions and a quarter sterling.

The Alexandra Docks and connected works, Newport, Monmouthshire, commenced in 1868, were opened in April last. The Alexandra Dock is 2,500 feet long and 500 feet wide ; has an average depth of 30 feet, and an entrance lock 350 feet long, approached from the Usk by a large entrance basin. The quays and buildings are spacious and well arranged, and the dockyard is in direct communication with the Great Western Railway system. A large graving dock is in course of construction. Thus far the cost has been about 500,000*l*. At Sharpness Point, on the Severn, between Gloucester and Avonmouth, the Gloucester and Berkeley Canal Company have formed what is virtually a new port, by the construction of a great tidal basin 350 feet long and 300 wide, a lock 320 feet long, and a discharging dock 2,200 feet long, having an area of 13½ acres. The North Eastern Railway Company have completed an extension of Middlesborough Dock, at an outlay of 120,000*l*. At Milford, a dock with an area of 50 acres of deep water, two large graving docks, and extensive wharfage, is being constructed by the Milford Docks Company, in connection with the Great Western Railway Company, at an estimated cost of 300,000*l*. : engineer, Mr. J. M. Toler. At Harwich, docks are being constructed on the mudland at Bathside ; but at present the progress is necessarily slow.

A new pier has been opened at Egremont, Liverpool. The lattice girders which carry the roadway are supported on cast-iron columns in pairs, braced together by wrought iron ties. The outer end of the pier is supported by groups of iron columns and forms a pier-head, which serves as a support to a bow-string lattice girder bridge 80 feet long, which works upon steel joints and rests at the other end on an outer pier-head, also formed by tripod groups of iron columns. The work was designed by Mr. Carson, C.E.

A substantial and costly bridge has been built by the Corporation at Hull, over the Hull river, connecting the eastern and western portions of the town at a point far away from the previous bridges.

Midway between the bridges at Nottingham and Newark, a bridge has been built across the Trent, on the site of an ancient ford by the village of Gunthorpe. It is 619 feet long with a clear width of 16 feet, and has five spans of 50 feet each, and one of 106 feet. The platform is carried on wrought-iron girders which are supported on cast-iron cylinders and timber piers. The abutments are of Derby rock faced with sandstone. It was designed by Mr. M. O. Tarbotton, C.E.

The Common Council of London have decided to widen London Bridge. The increased traffic, it is said, has rendered some such measure necessary. It is intended to remove the present granite parapets and carry out footways on both sides. These are to be supported on iron-arched beams, firmly tied to the masonry, above which are to be open frames of the same material, filled in with "an ornamental lattice, or light draper work." In other words, Rennie's magnificent granite structure, by far the noblest bridge the City possesses, and, in its simple majesty, perhaps the noblest bridge we have in England, will be changed into a hybrid fabric resembling, more than anything else, one of those lattice-girder railway bridges, with whose aspect we are only too familiar. That this will inevitably destroy the artistic character of the bridge, it is hardly necessary to say. The union of metal with stone is at best unsatisfactory, and only to be defended in new works on the score of economy. To disfigure a standard work by such incongruous additions is an act of Vandalism. From its solid construction the bridge may be capable of bearing these additions, but it is at least questionable whether the strain on the sides may not tell on the foundations, and shorten the duration of the fabric. But apart from this, any such widening as is proposed will assuredly be insufficient. Foot passengers and carriages will move more easily along the bridge, but the approaches, which are not to be widened, will be as much choked as ever. The only effectual way of affording the required relief would be to construct a new bridge lower down the river, and to improve the approaches to Southwark Bridge; an outlet would thus be provided for the enormous and fast-increasing eastern traffic, and a large portion of the western traffic would be diverted. This would be a costly process, but it must some day be undertaken. The railway companies have shown how readily new bridges can be thrown across the Thames when deemed necessary, and the Corporation of London ought not to be less open-handed where the work is of so much greater importance.

JAMES THORNE.

THE EXHIBITIONS OF PICTURES IN 1875

If Art shone with at all diminished lustre in 1875, the fault was with the artists rather than with the public. The stimulus of encouragement was not wanting. Exhibitions were never better, perhaps never so well, attended. Pictures found ready and liberal purchasers, in the country, no less than in the London, exhibitions. The number of pictures sold was above the average. Dealers, if rumour may be trusted, were exceptionally fortunate. The auction-room showed that the interest in works of art, and the desire to possess pictures by painters of reputation, whether living or deceased, has suffered no abatement, and that good, or at least popular, works command still increasing prices. And outside the auction-room came to light such facts as the offer of the unparalleled sum of 10,000*l.* for Landseer's "Stag at Bay"—the picture to which we last year drew attention in noticing the Landseer Exhibition at Burlington House—and the frank refusal of its owner (Lady Elizabeth Pringle) to part with it—"preferring to possess Landseer's *chef-d'œuvre*" even to that magnificent equivalent. When noble works are so appreciated artists might fairly be expected to do their best to produce them.

The Royal Academy Exhibition, though best of all, was hardly of average excellence. There were in it many able works, several of considerable promise by young hands, but of great works very few. There was no daring venture, no work of striking originality, little that stirred the heart of the spectator, or looked as if it had stirred the heart of the painter. The prevalent tone was of lassitude, uncertainty, want of definite purpose; the prevailing character a safe mediocrity; the bulk of the pictures seemed to be carefully calculated to satisfy the caprice of the hour, or the half-knowledge of the picture-dealer—now the real ruler of the market; pictures popular in form and subject, easily understood, of a smooth superficial elegance, carelessly conceived, imperfectly developed, and of low technical quality.

In the more elevated branches of the art the first place must be assigned to Mr. Armitage's "Julian the Apostate presiding at a Conference of Sectarians" (518), an incident related by Gibbon, and represented by the painter on a canvas of moderate size, with great dramatic power and historical propriety. The several characters are discriminated with skill and intelligence, and the calm, almost supercilious, dignity of the philosophic emperor is admirably contrasted with the excited manner of the several theological delegates. The costumes and accessories are accurate and carefully rendered, without attracting undue attention by archaic pedantry. The painter has worked with the feeling of the historian, suffused his mind with the spirit of the age and the men, and the picture, as a consequence, gains in proportion as it is studied. The execution is commensurate with the conception. The composition is clear and well-considered; the lines are ably disposed; the drawing, as in all

Mr. Armitage's works, masterly, and the colour rich yet sober. The influence of the school in which he studied is apparent, but less obtrusive than in his earlier pictures. It is, in short, a picture that a painter will linger over, and the historical student might profit from; but, either from the nature of the subject or the sobriety of the treatment, it did not attract much attention from the crowd. Perhaps it just lacked that vivifying spark of genius required to command attention even from the indifferent.

The popular verdict was in favour of a younger painter, Mr. E. Long. His theme was "The Babylonian Marriage Market" (482), where "the greatest beauty was put to the highest bidder; then the next in order of comeliness; and so on to the damsel who was equidistant between beauty and plainness, who was given away gratis," the prices paid for the lovelier going to endow the plain: a class of subjects made sufficiently familiar by French painters, but requiring nice tact to render them acceptable to the English taste. That tact Mr. Long exhibited, and the picture, which, with many shortcomings, displayed rare artistic powers, great skill in drawing, design, and colour, closeness of observation, discrimination of form, expression, and character, is by far the best we have seen from his pencil. But it belongs to a class of which one example is enough to evince mastery, and the painter should now turn to less ignoble topics.

Millais' "Crown of Love" (214), with some good points, was far from successful as a whole; strained, melodramatic, uninteresting. Perhaps he is relying on his landscapes, but they must be of a higher order than those of this year to maintain the old popularity. Scenes on so large a canvas, to continue to satisfy the eye, require a closer observation of nature, more depth and refinement of feeling, more sympathetic treatment, truer and less harsh and crude colour, and a more vigorous handling than these displayed. The novelty and daring of the earlier ones took the observer by storm, but they pall by repetition.

Mr. Leighton's "Eastern Slinger scaring Birds in the Harvest Time: Moonlight" (398), was remarkable for the effect of the nearly nude figure standing out from the moonlit sky; the fine drawing and modelling of the form, and the bold originality of the conception and treatment. Clever also was another product of his Eastern Travel, "A Portion of the Interior of the Grand Mosque of Damascus" (215), but we must look to future works for the full fruition of his Oriental studies. The "Venetian Girl" (354), was a rich piece of colour, but chiefly valuable as showing what he may accomplish in female portraiture—a branch of art in which our school, once the first in Europe, sadly needs renovation. "The Golden Age" (236), and the "Festival" (233), by Mr. Poynter, were two charming examples of decorative art, and in conjunction with what he has accomplished as Slade Professor at University College, produce the conviction that his appointment as Art Director at South Kensington is one on which the country may be congratulated, and holds out the promise of the introduction into our Schools of Design of a

higher tone, purer style, and more practical purpose. Mr. Moore works in a parallel line, and his "Palm Fan" (353), "Flower Walk" (356), and "Pansies" (357), were among the prettiest and most graceful semi-classical fancies in the Exhibition; but they want the strength and substance of Mr. Poynter's decorative pictures, and bear too evident traces of their Gallic origin. An eminently graceful work of this class was M. Tissot's "Bunch of Lilacs" (48). His society picture "Hush" (725), found more admirers, but was to our thinking less agreeable, and certainly lower in technical merit. Mr. Prinsep's "Minuet" (125) was a far prettier drawing-room scene. Different in subject, but of a not dissimilar order, was Mr. Leslie's delicately-imagined and as daintily-wrought "Path by the River" (438).

The grand attraction was, of course, "The 28th Regiment at Quatre Bras" (853), by Miss E. Thompson. It satisfied the military critics, found favour with the newspapers, and was warmly praised by the orators of the Academy Banquet. Whether it quite pleased anybody else we do not know. That it was less popular than "The Roll Call" may be partly due to the fact that the subject appealed less forcibly to the popular feeling. It was certainly not inferior as a painting; the faces at least were better rendered and more characteristic. Unfortunately it had to endure comparison with "La Charge des Cuirassiers Français à Waterloo" (613) of M. Philippoteaux, a work showing consummate artistic endowment and manipulative dexterity, not wholly satisfactory, but of uncommon power—a picture alongside which, Miss Thompson's could only pass for the product of a clever amateur. Miss Thompson represented only the British square, formed and waiting to receive the charge of the French cavalry; M. Philippoteaux, the charge itself, and various incidents of the battle spread over a wide area. The concentration of incident and purpose perhaps gives the lady's picture a stronger hold on our sympathy, but in all technical qualities the Frenchman's work was immeasurably superior. With these Mr. Herkomer's "Last Muster" (898) came almost involuntarily into comparison. The muster was of old soldiers at a Sunday morning service in the chapel of Chelsea Hospital, and the men were at once types of the several branches of the army and of the nationalities composing it—types clearly and sharply defined, without hardness or affectation, simply and cleverly contrasted, and characterised by a grave seriousness of purpose, which deepens into pathos as you observe by the drooping head and pallid face and hands of one fine old pensioner that it is indeed *his* last muster. Mr. Herkomer has not been long known as a painter, and this is a great advance on any previous picture. If he continues to paint as carefully and conscientiously, with as much earnestness of purpose and depth of feeling, he must before long take high rank. This picture, and Mr. Long's, already noticed, were the two of greatest promise among the works of the young figure painters.

Among the "figure pieces" by artists who have already

secured a foremost position, the "Three Jolly Postboys" (166) sitting at the Dragon, by Mr. Marks, left on the memory the impression of a choicer humour, more decided originality, and more matured technical dexterity, than any other. The post-boys were three of those quaint jovial boys of uncertain age, odd costumes, and free and easy manners, the older among us can remember as flourishing in pre-railway days. Mr. Marks' boys may be of half a century ago, and one if not two of them of more than half a century of years, clad in the short jackets and tights, and tall shiny white silk hats we all so well remember, seated over their bread and cheese at a table at the door of the Dragon; the eldest—the humorist of the party—cracking a joke with the good-natured waiting maid, and all "determinèd—and all determinèd to finish out the flagon." The sly humour of the old boy's face and twinkle of his eye are irresistible; and the colour, curiously difficult, as every painter will acknowledge, to harmonize in such a group, is in its way perfect. Mr. Marks' "Merrie Jeste" (242) was nearly as rich in humour; and his two drawings of "Canterbury Pilgrims," (675 and 683) "designs for decoration to be executed for Eaton Hall, Cheshire," show how accurately he has gauged the requirements of that kind of art, yet make us regret the time their execution will withdraw from his easel pictures in which his real strength lies.

Mr. Eyre Crowe's "Sheep-shearing Match" (202), might pair off with the "Spoil Bank" of last year, as an intensely realistic representation of ordinary 19th century life and out-door labour. His other picture, "The French Savants in Egypt, 1798," showed that he could with equal readiness project his mind into the past, and with a grim irony depict the ludicrous aspect of philosophers under unphilosophical conditions. Mr. Rivière had "The Last of the Garrison" (626), a bloodhound killed at his post, and "War Time" (89), both able pictures, but of inferior importance to those of the previous year. Mr. Alma Tadema's "Sculpture Gallery" (26) was the companion to his "Picture Gallery" which attracted so much attention in '75—hardly so interesting perhaps as that, but not less marvellously painted. His other picture was "Water Pets" (902), a Roman lady—not surpassingly fair—stretched at length on a cushion laid on a Mosaic pavement, feeding fishes in the impluvium. The theme, as idle as the lady's occupation, afforded the artist sufficient opportunity for displaying his archæological accomplishments, his perception of the home life of the time, and his almost unequalled facility in the artistic delineation of decorative forms and imitation of surface,—mosaic floors, veined marbles, gold, bronze, silks, being alike represented with almost deceptive fidelity, but each relegated to its proper place in the picture and subordinated to the general effect. Mr. Alma Tadema's pictures are not perhaps of a very high order of art, but this is a quality which they possess in so eminent a degree as to render them most valuable studies for our younger painters, who seldom possess this quality and less seldom recognise its primary importance.

Mr. Fildes, whose "Applicants for Admission to a Casual Ward," excited such general interest in 1874, did not follow up his success, his only contribution being a study "Betty" (1221). Mr. Wallis is another artist who has won a reputation which he scarcely shows sufficient zeal to extend, but his two pictures "Fugitives from Constantinople, 1453" (386) and "On the Ponte della Paglia: going to the Council" (405) though not calculated to attract the popular eye, possess fine artistic qualities, and announce still greater capabilities.

Well-known painters had pictures of a familar kind—some that might well have been spared, but many that for old acquaintance sake it was a pleasure to look upon. Such were Frith's "Sophia Western" (75)—not at all Fielding's Sophia, however—"Tom Jones" (257), and "La Belle Gabrielle" (249); and Goodall's "Rachel" (218), and "Day of the Palm Offering" (586). Mr. Poole's "Entrance to the Cave of Mammon" (261) was in the old unmistakable brown Poole tone and manner, but also with a rejuvenescence of the vivid poetic feeling and weird austere fantasy that seemed somewhat paling of late. "Ezekiel's Vision" (129) was wild and weird enough, but strangely antipathetic with the country and dreams of the visionary who saw the whirlwind, cloud and infolding fire, as he sat among the captives in the land of the Chaldeans by the river Chebar. Mr. Elmore's "Mary Queen of Scots, and Christopher Norton at Bolton Castle" (211); Mr. Wynfield's "Queen Elizabeth and Essex" (389), Mr. Ward's "Orphan of the Temple" (219), Sir J. Gilbert's "Queen Margaret" (227); O'Neil's "Incident in the Plague of London" (1855), and too many more, with many technical excellencies, were historical after the old conventional school-book fashion; a species of historic art of which happily the world is growing weary.

The portraits claim brief notice. The municipal personages in furs and robes may be passed over as interesting only to the parties concerned; and so may the numerous ladies and gentlemen whether in plain clothes or elaborate costumes. But there were a few of a better quality, though hardly such as recalled the glories of former days. Mr. Watts had a fine manly portrait of Sir Edward Sabine (188), and an excellent one of Mr. F. W. Walker, High Master of the Manchester Grammer School (193); Mr. Wells one equally good of the Right Hon. W. E. Forster (183); Mr. Dickinson a good but rather photographically unidealistic likeness of Mr. Gladstone (516), and one commendable for its fidelity of Mr. Cayley. Mr. Ouless was fortunate in having as sitters the author of the Origen of Species (155) and the painter of the "Three Jolly Postboys," (29), and produced such genial and characteristic likenesses as will assuredly be warmly cherished. These portraits designate him the most promising of our younger portrait painters. The ladies were less happy, the best of the female portraits only attaining a certain air of refinement and an adroit display of millinery.

In landscape the veteran Linnell, in his "Woods and Forests

(314) was earnest, conscientious, full of feeling and susceptibility as ever. The hand perhaps has lost somthing of its cunning, but "it is the mind that sees," and Linnell's mind is as warm and sympathetic for the nobleness of our Surrey heaths and woods as when he first painted them. Hook was on his old ground in "Hearts of Oak" (47), and "Samphire Gatherer" (439); seasoning his landscape with a pleasant touch of humour in "Wise Saws" (256), and wandering somewhat further a-field than is his wont in "The Land of Cuyp" (308). The last was especially noticeable. Recalling with singular fidelity the characteristic features of the Dutch landscapist's country, where an inferior master would have repeated one of Cuyp's morning or evening effects, Hook bathed the landscape in the clear light of the midday sun and imparted to it an air of bright and happy originality.

Mr. Brett in "Spires and Steeples of the Channel Islands" (597), fairly rivalled his "Scilly Islands" of last year. But why spires *and* steeples? Apart, however, from the tautology or affectation of the title, the picture is one of remarkable power. The jagged rocks stand out with almost stereoscopic distinctness against the clear sky and sunny waters, looking solid as the rocks themselves. But it is the sea that is the triumph of realistic painting. It is flooded with light and recedes miles away, clear, bright, and limpid, every wave and riplet sharply cut, every varying curve nicely defined, yet the colour intense throughout—just what the actual scene might be if reflected in a mirror, nothing concealed, nothing evaded, nothing idealized. Admirably drawn, admirably painted; of its kind the highest, but without a spark of poetic fire or feeling. But this, looking broadly at landscape art as repesented in this exhibition, seems to be very much what it is drifting towards. Our landscape is becoming more and more prosaic, photographic, literal. However it is adapted to the taste of the day and painters find their account in it.

In "Shields Harbour: Herring Boats towing in" (874), and "London River: the Limehouse Barge-builders" (108), by Mr. Napier Henry, and the "Entrance to Bristol Docks: Eventide" (146) by Mr. C. P. Knight, is shown how much remains to be achieved by a keen observer in our sea-port and river side localities. Richmond Hill (237) is one of Mr. V. Cole's most ambitious efforts. It is on the largest scale, and painted with scrupulous fidelity. Every thing is there—trees, meads, villas, the winding river with its eyots, skiffs and swans, the distant hills and purple haze—everything but the ineffable charm of that matchless scene. But if he has failed he has failed nobly, and deserves all honour for the effort. "Summer: Noon" (1213), more within the compass of his pencil, was more successful; "Loch Scavaig, Isle of Skye" (513), "sublime in barrenness," less so. "Summer Moonlight in the Downs" (429), by Mr. H. Moore, was a beautiful and poetic rendering of a charming effect. Mr. Docharty's "Gaffing a Salmon" (860), a fresh and vigorous representation of a very different but more exciting scene.

In "Sandy Cove : tide flowing" (369) Mr. E. W. Cooke had one of his clear, hard, but scientifically true, sea and coast pieces, which, like good wine, will mellow with age ; and in "H.M. Turret Ship Devastation" (232) one that will scarcely improve by keeping. This picture was painted for Mr. Brassey, to present to the Royal Naval College, Greenwich, as a portrait of the fighting ship of the present, if not of the future ; and Mr. Cooke had shown it firing a salute, and thus concealed the form of its hull in a cloud of smoke, the ship's lines not being, as would seem, compatible with his notions of artistic beauty. And not only so, but three other ships of the new class, in company with the "Devastation," are similarly engaged, and their forms, in like manner, disguised. In what is avowedly a portrait of the ship, this surely is too grave a sacrifice to the graces. The crude outline might have presented a difficulty, but to evade it thus is hardly the *ars celare artem.* A Royal Academician ought not to have descended to so transparent an artifice.

There are other landscapes and sea pieces that might well be noticed, but space will not permit. One, however, must not be passed over. "Right of Way" (25) might need some allowance as having been painted in failing health, and left unfinished and unrevised. But its sterling technical qualities, and intelligent, thoughtful character, make us feel how serious a loss English art has sustained by the death of Frederick Walker.

The *Exhibition of Works by the Old Masters and by Deceased Masters of the British School* was smaller in extent than previous exhibitions, containing, in all, only 269 pictures. Of these, the Queen contributed 4 ; the Duke of Sutherland 5 ; the Duke of Abercorn 10 ; Lord Yarborough 14 ; the Marquis of Bristol 6 ; Earl Fitzwilliam 6 ; the Earl of Denbigh 4 ; Sir W. Miles 8 ; Mr. W. Graham 12 ; Mr. A. Levy 15 ; Mr. K. D. Hodgson, M.P., 6 ; Mr. W. Fuller Maitland 6 ; and Mr. H. W. F. Bolckow 4 ; and when the fame of their collections is remembered, it will be understood that the exhibition, if not extensive, was of more than ordinary value.

Of deceased British masters, there were to have been special collections of the works of Etty, Callcott, and Maclise ; but, "owing to unavoidable circumstances, the Academy was unable to include in the exhibition a selection from the works of W. Etty, R.A., as originally intended." There was not, in fact, one of his pictures in the exhibition ; of Callcott's there were only 13 ; of Maclise's 15, but among these were several of his largest and most important works.

On the other hand, by Sir Joshua Reynolds, of whom there was no special announcement, but who always shines in these exhibitions, there were no fewer than 25 paintings ; by Gainsborough 10 ; Romney (and it is always instructive to have Romney's portraits brought into contact with those of Reynolds and Gainsborough) 7 ; Hogarth 7 ; Old Crome 7 ; Morland 7 ; Cotman 7 ; Turner 5 ; Müller 3.

Turning to the foreign masters, we had, to compare with

Reynolds' 25, no fewer than 14 portraits by Vandyck, mostly of English worthies. By Titian there were 7 pictures; by Velasquez 4; Ruysdael 5; Rubens and Rembrandt, Claude Lorraine and Gaspar Poussin, each 3; Canaletto 4; by Raphael only one, and that of questionable authenticity.

The value of an exhibition covering so wide a range, and collected from such varied sources, alike for comparison and study, and as illustrating the pictorial wealth of the country, is evident. But for us, the selection of the works of "deceased masters of the British school" should have a special interest, if judiciously made and on a sufficiently broad basis, as affording materials for an estimate of the true position of the men and the means of tracing the growth and development of their artistic powers, as well as of judging of the advance or otherwise of the school in similar branches of the art. For these purposes, unfortunately, the late selections were insufficient in number and inadequate in kind, being obtained apparently, not on any carefully considered plan, but consisting of such examples as were voluntarily offered by their owners. And these were exhibited without an attempt being made to afford any particulars respecting them, or any information as to the painters. Nothing would have been more easy then to have given in the Catalogue the leading dates in the painters' lives, if it had been thought undesirable to indicate the characteristics of their respective styles, and the modifications, if any, at well marked epochs. In any case, a brief account of each picture should have been given, the time when painted, the circumstances, when known, under which it was composed, and any particulars respecting it which might have an interest for the student or the general public. Instead of this, the only scrap of information to be found in the Catalogue was the size of the picture, with, in some instances, the year in which it was painted—no difference being made, in this respect, between the "selected" pictures and the general collection.

The selection from Maclise was the most comprehensive, ranging, as it did, in time from the "Veiled Prophet of Khorassan," 1833, to "The Eve of St. Agnes," and "The Last Sleep of Duncan," 1868, and including such works as "The Marriage of Strongbow and the Princess Eva" (10 feet by 17 feet), "Caxton's Printing Office," and "The Banquet Scene in Macbeth," (each 6 feet by 10 feet). Looking over these works, it was impossible not to admire the extraordinary powers of the artist, his skill in drawing and design, knowledge of technical resources, facility and precision of handling, research, industry, scrupulous working out of details, and possession of nearly all the qualities that go to the making of a great artist, but marred by some fatal errors in taste, perception of character, and the apparent inability of knowing when to stop. The huge Strongbow canvas, for instance, has every inch filled with incident and crowded with detail, every person and all the accessories being treated with equal emphasis. The eye consequently wanders from one group to

another and fixes definitely on none. As a whole, the impression is vague and bewildering, but regarded successively, each part is a study for its thoroughly well-considered purpose and brilliancy of execution. If Maclise could only have learned to subordinate in his pictures what *is* subordinate, if not indifferent, in the reality, and have lost or laid aside his passion for theatrical properties and melodramatic expression—as he did, to a considerable extent, in his great mural painting, "The Meeting of Wellington and Blucher,"—he would have been by far the most powerful historical painter of his time and country, and one of the most powerful of any time. As it is, this selection of his works was to the young painter as much a beacon to warn as a guide to follow.

The Callcott selection was less interesting and less instructive. Thirteen pictures got together by chance, and mostly small, would ill represent the labours of one who painted landscapes for over forty years. They were enough, however, to show his general elegance and refinement of style, passing into paleness and feebleness as he, in his later years, took to larger canvases and worked less directly from nature. His "Shrimper: Coast scene" (14), painted in 1806, is far more solid in the forms, better drawn, and painted with a firmer touch and fuller pencil than the later and more refined "Italian Scene" (45), or the large and vacant "River Scene" (68). It is noticeable how timid he becomes in dealing with cloud-forms on the larger canvases, whilst in his early and smaller works, they are frequently marked in with great precision.

Reynolds' pictures were a great treat. Not only were there his fine, manly men—Lord Mountstuart (207), Sir Richard Worsley (218), Sir John Thorold (82), John Earl of Egmont and his Wife (90), Captain Hamilton (114); his graceful women—the charming "Mrs. Pelham feeding Chickens" (108), an exquisite picture, the more serious-looking, but hardly less attractive Mrs. Morris (83), Mrs. Weddell (34), Lady Frances Wyndham; and his matchless children,—quaint and pretty Lady Gertrude Fitzpatrick, "Collina" (73), standing on a hillock with crossed hands, her arch eyes and lips ready to break into a laugh—seen full against a bright sky: the very perfection of child portraiture, and Lady Caroline Montagu Scott (43), in white dress and black hood and broad-brimmed black hat, in a snowy landscape, her hands in a muff—the damsel that looked so fresh, saucy, and winning, when first shown at the Academy Exhibition, that Horace Walpole longed, as he wrote to Lady Ossory, to "catch her up in his arms and keep her till she is in a sweat and squalls;"—not only were there these and others like them, but also his irresistibly fanciful "Cupid as a Link Boy," and "Mercury" with the cat-like countenance; and a few of his semi-classical ventures, "Nymph and Child" (63), and "Cupid and Psyche," glorious in colour and worthy of all admiration for the rich impasto and light zephyr-like touch.

Gainsborough's portraits held their own well alongside those of Reynolds, but to speak of them as superior, according to the modern fashion, is mere folly. Gainsborough's women are as lovely as the loveliest of Reynolds's, and about some there is a tender grace and fascination not found in the President's; but Reynolds excels in the loftier order of beauty, in the expression of mental capacity and personal dignity, while in men of intellectual mark he is beyond comparison greater. Nothing, however, could well exceed the elegance and sweetness of Gainsborough's "Sisters" (12), the homely pleasantness and charm of his daughters Polly and Peggy (98), or the grace and noble bearing of the Duchess of Montagu (156). It would be the blackest heresy to suppose that the English girl or woman of to-day is less lovely, winning, or graceful than was her grandmother in those fanciful old habits, or that our artists, with all the new lights of pre-Raphaelism and photography, are less able to depict them; but how is it that no such portraits are exhibited now, while they exist by hundreds from the pencils of Gainsborough and Reynolds? Generally Gainsborough's men want the robust manliness and distinctive intellectual character of those of Reynolds, but they are always bright, cheerful, and vigorous. Tickell, the poet (231) was a very good example; and there was a capital family group of the youthful Charles Marsham, afterwards Earl of Romney (81), in the act of gathering nuts into his eldest sister's lap, a younger one looking on—a picture fresh and bright as the day it was painted.

With these portraits so intensely English in every respect, it was instructive to compare those of English men and women by the courtly and accomplished Vandyck, whose portraits of our countrymen are indeed so numerous that, as Walpole said, the generality of people can hardly believe him to have been a foreigner. Our aristocracy were certainly never better painted. The beauty, dignity, and grace of Vandyck's ladies have become a common-place, but they have little of the fascination of Reynolds' and Gainsborough's. His portraits of the more distinguished men recur at once to the memory when their names are mentioned. Nobody pictures Charles I, or Strafford, except as Vandyck painted him. Of this class were shown his Strafford (111), in armour, and Archbishop Laud (113)—Lord Fitzwilliam's famous pictures; of ladies there were the Duchess of Hamilton (149), the very perfection of innate dignity and stately, but quite unconscious, aristocratic bearing; the Countess of Clanbrazil, the Duchess of Richmond, attended by Mrs. Gibson the dwarf (194), and superior to any as a work of art, the splendid group of the Doria Family, painted before his style was rendered superficial by London success, fashion, and the stress of commissions.

We must leave all else—but what this all means will be understood on mentioning that it includes Hogarth's "Calais Gate," lost for the National Gallery awhile back, and now the property of Mr. Bolckow; Turner's "Sunset at the Mouth of

the Thames" (91), "Vintage at Macon" (122), and wonderful "Wreck of the Minotaur" (158); half-a-dozen genuine Titians, including the study for the Peter Martyr, and now the best substitute for the matchless picture unhappily destroyed; two or three magnificently robust portraits and a "Deposition" by Tintoretto; a very pretty Claude; a first rate "Landscape" by Salvator Rosa, painted as a companion to the Woodman in the National Gallery, and at least as fine; Rembrandt's grand "Adoration of the Magi," from Windsor Castle (152), no less fine "Deposition" (153), lent by the Duke of Abercorn, and brilliant "Portrait of an Old Woman" (157), the property of the Earl of Yarborough; and, in its way finest perhaps of all, Rubens' superb "Conversion of St. Paul," from Leigh Court.

After these we may pass over the exhibition of the *Society of British Artists*, and that of the *Female Painters*. Nor need we now stay to examine the two *Water Colour Exhibitions*. They were as pleasant as ever to loiter away an odd half hour over; but our water-colour painters are—where they were, and one cannot go on repeating the same phrases respecting them for ever. When our water-colour painters infuse a little new vigour, a dash of originality, or even return to their old brightness, brilliancy, and freshness, it will be time to write about them. Meanwhile we repeat they paint very charming pictures, and show as much skill, taste, and delicacy as in days gone by; but a school that does not advance is already declining, and this appears to be too nearly the condition of the English school of water-colour painters.

Then there were the Winter Exhibitions of the two Water Colour Societies—which have done much to weaken the regular exhibitions; the Exhibition in Black and White at the Dudley Gallery, which appears likely to be annual; the Doré, which has become perennial; the Burlington Club Exhibition of Girtin's Drawings; Loppe's of Alpine Scenery; and that of Pictures and Sketches from the New Forest, made in the hope of doing something to arrest the vandalic enclosures and threatened destruction of the finest remaining vestige of our ancient forests—a danger now happily averted.

The French and Flemish Exhibitions in Pall Mall and Bond street hardly fall within our scope, but a word would seem to be called for by the more pretentious International Exhibition of Paintings in the galleries of the Exhibition Building at South Kensington and the Albert Hall. Some pictures here were of undoubted excellence, and notably the "Foundling" (464), by Gabriel Max, the same artist's "Margaret," Prof. Block's "Samson Betrayed," the "Paul and Virginia" of Van Lerius, the "Carnival in Venice, 15th century," of Prof. Becker, and a few more, but the bulk of the collection was of the most common-place description, the most remarkable point about the pictures being the extravagant prices at which they were valued. This exhibition, and those at the Alexandra and Crystal Palaces, and no less the shoals of foreign pictures in the hands of dealers

of all grades, provincial as well as metropolitan, serve to indicate that there is developing in more than one Continental centre a very active manufacture of pictures for the English market. Hundreds, indeed thousands of pictures are here which *must* have been painted specially for England, since they are of a kind which would have had no chance of a purchaser in their native country, and are offered at prices which no one would have dreamt of asking—except of an Englishman or an American—in the place of production. For the most part they are flimsy productions, such as, by a skilful division of labour, may be turned out with great rapidity in any quantity, made to bear a superficial resemblance to the style of some popular painter, and wrought with considerable adroitness, but essentially worthless—pictures against which the unwary should be warned.

Whilst strongly deprecating any repetition in a building having a kind of national character, and under semi-official auspices, of such a collection of rubbish as formed the bulk of the International Exhibition of 1875, we should view with regret the discontinuance of exhibitions open to the painters of all countries. The International Exhibition of 1875 was a puerile failure, but it does not follow that international exhibitions, if properly conducted, are worthless. On the contrary, there can, we apprehend, be little difference of opinion as to the benefit to amateurs and artists, and not less to the wider public for whom, after all, exhibitions are mainly devised, by thus having brought into juxtaposition really good works of the leading continental and British painters, and the opportunity afforded of estimating their respective qualities. To be useful, however, or even interesting, such exhibitions require skilful organization and judicious management. They must not be mere sale-rooms, or art bazaars, made up of dealers' pictures chosen with an eye to possible customers, and meretricious daubs prepared to lure art union and other uninformed buyers. The best painters of every country should be appealed to, and many would no doubt respond, whilst our countrymen would be put on their mettle and do their best to come off victors in the art-combat.

But exhibitions of this kind to be successful must not recur too frequently. They should be regarded as an occasional stock-taking of the artistic capital of the several countries, a friendly comparison of relative progress, a means of mutual information and stimulus. An "*Annual* International Exhibition of Fine Arts," as that of 1875 professed to be, is an absurdity. Were it even to start well, it would soon dwindle into insignificance.

THE MUSIC OF THE YEAR 1875.

THE progress of music in England continues to be chiefly noticeable in the executive branches of the art. Composition, although not absolutely dead amongst us, is neglected to such an extent, that the new works of importance written or published during the year might easily be enumerated; and thus it is to the concert-room and the stage, to the orchestra and the keyboard, rather than to the composer's desk, that we must look for signs of advance or retrogression. This is, in many ways, anything but a satisfactory sign, for it either betokens a decadence of productive power among our native musicians, or else it proves that the reward to be obtained for new works is so slight, in comparison with that which can be gained either by teaching or by public performance, that the artist, unless independent of his art as a means of gaining a livelihood, has but little choice. It is to this latter cause that we are inclined to attribute the apparent barrenness of our composers. With men of the high ability, even if not absolute genius, of Professor Macfarren, Mr. Arthur Sullivan, Sir Julius Benedict, Mr. J. F. Barnett, and several other writers of considerable promise, it would be as idle, as it would be manifestly unjust, to assert that the creative faculty has no place in the present generation; and therefore it must be held to be painfully true that it is rather to the fact that composition is unremunerative, than to any inability to compose, that the existing dearth of new music is to be attributed. A great singer can, as long as voice and health last, reckon upon a competent income, and, in some few cases, upon an immense salary, while the time of a teacher of high repute may literally be said to be made up of golden hours; but when we come to the composer's prospects, the picture is at once shaded. The metropolitan societies, from which much might be expected, cannot as a rule afford to encourage composers by undertaking to purchase their works; and thus, if they elect to write, instead of devoting their energies to playing or teaching, they must look to the ordinary market of the publisher's shop as the means of disposing of their wares. The failure of this resource is only too apparent. The musicseller naturally and legitimately looks to that which will bring in a speedy profit as the most satisfactory form of investment; and as the public demands in the main works of a comparatively low class, the composer, when he obtains a remunerative engagement, is at once requested to turn his attention almost exclusively to the supply of music which experience proves will find a ready sale. To this cause must be attributed the flood of what are termed Royalty songs, the merit of which, whether as regards words or music, it is oftentimes extremely difficult to discover, and which depend for their circulation upon the popularity won for them by an artist who has a direct pecuniary interest in singing them, and hence in pushing their sale. So again with regard to music

for the pianoforte, the great domestic instrument of the present generation. A very large proportion of the new pieces of the past year are nothing more than "arrangements" or "adaptations," written to order, as if originality or invention were out of date, and as if a popular air, with intricate variations calculated to exhibit the mechanical ability of the performer, were the *ne plus ultrâ* of drawing-room music. It is, then, because the public demands music of this class, which, whether vocal or instrumental, has but little claim to be regarded as anything more than a mere *rechauffé* of well-worn ideas that the lists of the chief musical firms for the past year form such a melancholy exhibition, and that it is difficult to select even here and there a work which is calculated to do honour to English art. There was a time, in the days of Sterndale Bennett's youth, when English music was making its way even in classical Germany, but now it seems to have relapsed; and, despite the welcome recently said to have been accorded to Mr. Arthur Sullivan's *Light of the World* in Italy, it would be difficult to point to any satisfactory evidence that our country is even decently represented in the matter of composition among the musical nations of Europe. Even in works for the Church, the staple product of the age is the hymn tune, and that oftentimes of a very inferior build, and thus we are forced to the conclusion that, from one or other of the causes we have named, English composers are holding their hands, or are deserting the pen for the bâton or the Professor's chair. That this is an inevitable result of the present system, we are compelled to admit; but it is impossible to look back even for twelve months without seeing that matters are growing worse every day, and that it is therefore absolutely essential that steps should be taken to induce those who have already given to the world works of sterling value, once more to take up their pens. When we find Dr. Macfarren at the head of the Royal Academy of Music, and occupying the post of Professor of Music at Cambridge; when we see Mr. Sullivan's name announced as the director of the music at the Westminster Aquarium, where concerts are promised twice daily throughout the year, we have a very clear indication of the causes which underlie the present musical famine; and it is difficult to say how the evil can be remedied. Until some Prince Esterhazy or Count Rasoumowski arises to encourage and reward composers, it would at least be a movement in the right direction if the conductors of the Sacred Harmonic Society, of the Philharmonic Society, of the Crystal Palace Concerts, of the Monday Popular Concerts, and of the other leading societies, were to offer inducements to eminent musicians to furnish them with new works, and we can scarcely doubt that, under a wisely arranged scheme, such a proceeding might be made remunerative. At present, things are absolutely at their worst; for not only during the London concert season, but at the provincial festivals of 1875, novelties by English writers have only been conspicuous by their absence.

When, however, we turn from the creative to the executive department of the art, the state of the case is entirely different, for not only are our musical societies increasing in all parts of the country in number and excellence, but musical education is rapidly spreading. The Royal Academy of Music, under its new Principal, whose appointment in succession to Sir Sterndale Bennett may he reckoned one of the "events" of the year, is reported to be in a thoroughly flourishing condition as regards the entry of new students; while the arrangements for the opening of the National Training School at South Kensington are rapidly approaching completion. Meetings in aid of the project have been held not only in many of the provincial towns, but in London, where, after a conference of persons distinguished in Church and State at Marlborough House, at the invitation of the Prince of Wales, a meeting has been held at the Mansion House, and considerable support has been promised towards the endowment of scholarships. The building to which allusion was made in the "Companion" for last year, as being then in course of erection by Mr. Freake, for the use of the new school, has been munificently presented to the Council in perpetuity for the purpose; and as soon as four hundred free scholarships of 40*l.* a-year for five years have been subscribed for, or, in other words, as soon as an income of 16,000*l.* a-year is secured for the professorial staff and other working expenses, the institution will be opened. At present the arrangements are being made by the following noblemen and gentlemen forming the "Committee of Management":—His Royal Highness the Duke of Edinburgh, K.G., Chairman; His Royal Highness the Prince Christian, K.G.; the Right Honourable the Lord Mayor of London (for the time being); the Viscount Newry; the Lord Clarence Paget, K.C.B.; the Lord Alfred Churchill (or Chairman of the Council of the Society of Arts for the time being); Sir William Anderson, K.C.B.; Sir Henry Cole, K.C.B.; Mr. Alan S. Cole, Honorary Secretary. These gentlemen, among whom, it will be observed, there is not a single professional musician, have appointed a body of what are announced as "Professional Examiners," consisting of Sir Michael Costa, Sir Julius Benedict, Sir George Elvey, Professor Ella, Mr. Charles Hallé, and Mr. John Hullah.

Some idea of the system on which the institution is to be managed, may be formed from the provisional rules issued for the guidance of intending competitors for the scholarships. The first section relates to the nomination and registration of candidates for local examinations, and runs as follows:—(1.) Candidates for scholarships will, in the first instance, be required to pass a competitive examination, to sit at which they may be nominated, or may apply for the registration of their names by the local committee, corporations, schools, or individuals who found scholarships. (2.) The competition may be limited or open, but in each case the character will be decided by the founders of the scholarships. (3.) The competition will be

limited when candidates are nominated. (4.) The competition is open when any person is free to apply for the registration of his or her name. (5.) An examination fee of 5*s.* will be paid by each competitor, irrespective of the character of the competition.

The object of this competition is stated to be "to find out young persons of any station of life having a natural disposition which ought to be cultivated for the advancement of Musical Art and public benefit. This musical gift may manifest itself either in vocal power, instrumental ability, or power of composition." The subjects in which the candidate will be examined in competition are as follow:—(1.) Reading aloud and recitation with clearness of pronunciation; writing legibly from dictation. (2.) Elementary knowledge of musical notation and knowledge of the principles of music. (3.) Performance on some instrument or singing (at sight also if possible) or composition. After a candidate has been successful in a competition, and has been named for a scholarship, he or she will be admitted to the Training School upon the production of the necessary certificates; his or her continuance as a student in the Training School will depend on the report of progress by the examiners and the director of studies. All scholarships confer the right of obtaining the best musical instruction in the school without payment of fees of any kind, or for instruments, music, and books, which are provided for use in the school. No particulars are yet supplied as to the character of the instruction to be given in the school, and it would be obviously impossible to furnish such information until a Principal is appointed, but the following statement is given as to the preliminary training which all the students admitted to the school will receive:—(1). They may be required to perfect themselves in reading aloud and in recitation. (2.) Every student will be required to go through a preliminary course of learning the pianoforte, the principles of harmony and composition, also exercises in a singing class, and to go through a general course of preparatory work. (3). All vocalists will pass through an elocution class, and be constantly practised in elocution, in the English language, and in deportment, and when properly qualified they will be taught pronunciation of foreign languages. Thus far of course everything is merely preliminary and until the head of the school is nominated it will be impossible to form any opinion as to the probable measure of success which is likely to attend it or as to the plan on which it will be governed. It will, however, we have reason to believe, be in full working order before another year passes away.

The Musical Association to the establishment of which allusion was also made in the pages of the "Companion" for 1875 has passed successfully through its first session during which eight papers were read at as many meetings of the members, and in the majority of cases were followed by discussion. The text of the papers and a tolerably complete report of the debates has been supplied in a convenient form in the "Proceedings of the

Association" recently issued. The papers read were devoted mainly to topics in full keeping with the objects of the Association, as stated in its title, viz., "the investigation and discussion of subjects connected with the art and science of music," although it will scarcely be denied that an undue preponderance of the essays was devoted to the more abstruse and scientific divisions of the subject. Among the most attractive papers of the session were those which were illustrated by experiments, viz., Dr. W. H. Stone's "on Extending the Compass and Increasing the tone of stringed instruments," in illustration of which a quintet by Onslow, written by the composer down to CCC (the note reached by Dr. Stone's method) was played: and Mr. J. Baillie-Hamilton's paper "on the Application of Wind to Stringed Instruments" in illustration of which he produced some of the varied tones of a string organ from an apparatus in which he has since carried out several improvements and which he hopes ultimately to turn to practical uses. Mr. R. H. M. Bosanquet, M.A., Fellow of St. John's College, Oxford, read two papers "On Temperament: or the Division of the Octave"; Mr. Sedley Taylor, M.A., of Trinity College, in the sister university, contributed a description of "a Suggested Simplification of the Established Pitch Notation." The main features of his scheme are the use of a wavy line to show the position of the tonic upon the five line staff of a piece of music, a modified form of the wavy line being introduced in keys with sharps or flats, the former being indicated by the turning of the loops upward, and the latter by the turning of the loops downward. Mr. Taylor further proposed to mark the occurrence of a change of key, or a modulation as it is technically termed, by a corresponding change of position of the wavy line to show the fresh tonic. The scheme included various minor provisions to meet the case of accidentals, &c. Another paper on a kindred topic was read by Dr. John Stainer, the organist of St. Paul's Cathedral, who proposed a new form of notation by which he undertook to show by the shape of a note whether it was sharp, flat, or natural, using round figures for naturals or normal sounds, diamond notes for sharpened sounds, square notes for flattened sounds, the ordinary semibreves, minims, crotchets and quavers being printed in this shape. It was afterwards ascertained that a notation of this description was already in use both in England and America, and a correspondent of the *Choir* stated that he had adopted it with the best results. At another meeting Mr. John Hullah called attention to "Musical Nomenclature," and to the evils of the present polyglot system by which words drawn from three or four European languages are used indiscriminately in the course of a page of music vocal or instrumental, various equivalents not only in the directions as to expression and execution, but in the names of notes and the designation of intervals being employed in different countries and often by different teachers in one and the same country. As a remedy for this puzzling and inconvenient diversity Mr. Hullah recommended

the adoption of an uniform system of nŏmenclature, and a strict adherence to the Italian terms for the verbal directions in music pages. The remaining papers of the session consisted of an essay "on the fallacies of Dr. Day's theory of harmony, with a brief outline of the elements of a new system," by Mr. Charles E. Stephens; and a paper by Mr. Alex. J. Ellis, F.R.S., on "illustrations of just and tempered intonation." The only complaint brought against the proceedings of the session was on the score of their scientific character, and several papers of a more popular type find a place in the scheme of the second session.

In the other musical institutions of the metropolis there is but little change to report, except that a body formerly known as the "Church Choral Society of London" has changed its title to that of "Trinity College, London," and is establishing a series of lectures and classes, in addition to the continuance of its former work in the examination of candidates for certificates. The College of Organists held a series of afternoon meetings during the summer, at which papers of interest were read by Mr. John Hullah, Mr. W. A. Barrett, Mus. Bac., Oxon, Mr. C. E. Stephens, and other gentlemen. The appointment of Dr. Macfarren to the chair of music at Cambridge, in the room of Sir Sterndale Bennett, and of Mr. Joseph Barnby to the valuable post of organist and succentor of Eton College may be chronicled as being likely to lead to important results at both institutions. A very necessary but still insufficient increase has been made by the University in the Professor's income, and additional work in the way of lectures will, it is needless to add, be performed in return. It cannot, however, be doubted, having regard to the fact that the universities are still to a great extent the training schools of the English church, that what is really required is a resident professor, with an adequate staff of assistants in each case, and until the music chairs are sufficiently endowed to provide for such a system it will be idle to hope for any great extension of musical education among the clergy.

Nor does the record of the efforts now in progress for the promotion of national musical education end here. In this country we have not, it is true, the municipal organization for the musical instruction of the people of our great cities, which has been so useful in Paris and other large continental towns where the Orphéonistes are trained in great bodies by efficient teachers and are assembled at intervals for the purpose of giving concerts, but there is nevertheless a work in progress which will ultimately bear fruit—the musical inspection of the training colleges by Mr. John Hullah. The students in these institutions form the future teachers of a large number of the elementary schools of the country, and it is therefore almost impossible that the annual visits and examination of the inspector can fail to induce a more general attention to the subject in the national schools. At present the "grant" for music can be obtained from the Education Office for any school in which singing by ear is practised with any degree of success, but this, as Mr. Hullah

points out in his last report, is a very different thing from musical education, and is, in fact, more deserving of recognition as one of the aids to the maintenance of discipline among the children than as an equivalent for musical education properly so-called. As, however, the standard in this particular is raised among the teachers,—and this slowly but surely will be the result of the employment of a special musical inspector in the training colleges,—we may look forward to an increase of the number of schools in which sight-singing, as distinguished from singing by ear, is regularly taught. Until that time arrives the music grant will continue to be given for a very unsatisfactory substitute for musical teaching. In the reports of the school inspectors for the past year the general average of the musical attainments of the children in the schools in receipt of State aid is reported to be decidedly low, and there can therefore be no question as to the work which remains to be done. The Tonic Sol-fa system appears to be extensively adopted by teachers, and very high praise is given to the method by some of the inspectors, who argue that it is by far the simplest plan for teaching young people.

Turning from the academy and the school to the opera-house and the concert-room, we have before us a very striking spectacle of musical activity. After many promises and as many failures Wagner's *Lohengrin* was produced at both the Italian opera houses of the metropolis—at the Royal Italian Opera, Covent Garden, under Mr. Gye's management, on the 8th of May, and at Her Majesty's Opera, Drury Lane, under the auspices of Mr. Mapleson, on the 12th of June. As a certain amount of historic interest will be attached to these initial performances of the much discussed work on the English stage, we append the cast at the two houses :—

	R.I.O., Covent Garden. May 8, 1875.	H.M.O., Drury Lane. June 12, 1875.
"Elsa di Brabante".	Albani	Nilsson.
"Ortruda"	D'Angeri	Titiens.
"Federico"	Maurel	Galassi.
"L'Araldo del Ré"..	Capponi	Costa.
"Enrico"	Siedeman	Behrens.
"Lohengrin" ..	Nicolini	Campanini.
Conductor.. ..	Vianesi..	Costa.

In each case the utmost efforts had been made to produce the opera with the fullest effect, both as regards the execution of the music and the provision of elaborate scenic accessories, and without entering on the vexed question of the merits of the composer's work, or of the soundness of his theories, which, pursued to their logical conclusion, would leave little room for Italian opera on the stage, it will be admitted, even by his strongest admirers, that ample justice was done to him, with the single drawback, that the original language of his libretto

was departed from. With this exception, the operatic season dragged on as heavily as usual at both houses, the stock works of the repertoire being given night after night with star singers, while of novelties or of the classic revivals which once won fame for Mr. Mapleson, there were absolutely none. *Lohengrin* was only given nine times at Covent Garden, and nine times also at Drury Lane, and the other operas were for the most part well-worn works, as will be seen from the following table of performances at both houses :—

		Covent Garden.	Drury Lane.
		Times.	Times.
Mozart ..	"Don Giovanni"	9	2
	"Nozze de Figaro"	3	4
	"Il Flauto Magico"	2	
Beethoven ..	"Fidélio"	1	2
Weber	"Der Freischutz"	3	
Wagner	"Lohengrin"	9	9
Rossini	"Guglielmo Tell"	4	
	"Il Barbière"	3	6
	"Semiramide"	2	4
Donizetti ..	"Lucia"	2	5
	"Lucrezia"	1	4
	"L'Elisir d'Amore"	1	
	"La Figlia"	3	
	"La Favorita"	1	
Verdi	"Traviata"	3	3
	"Rigoletto"	3	2
	"Trovatore"	1	2
	"Il Ballo"	4	
Bellini	"Norma"	1	1
	"Sonnambula"	1	3
Meyerbeer ..	"Huguenots"	4	4
	"Roberto"	1	
	"L'Africaine"	3	
	"Dinorah"	3	
	"L'Etoile du Nord"	3	
Auber	"Les Diamans de la Couronne" .	1	
	"Fra Diavolo"	5	
Gounod	"Faust"	4	7
	"Roméo e Giulietta"	3	
Balfe	"Il Talismano"	..	3
Flotow	"Marta"	..	1
A. Thomas ..	"Mignon"	..	1

This list will be sufficient to show not only how very meagre was the list of novelties, but also how completely the number of performances of the works of Mozart and Beethoven is distanced altogether by those of the lighter and more popular school. At the Gaiety Theatre a French troupe of artistes gave a far more original bill of fare, their performances during the season, which lasted from the 15th of May to the 23rd of July, including many little known works, such as Boieldieu's "La Dame Blanche," Halévy's "Les Mousquetaires de la Reine," Paer's "Le Maitre de Chapelle," Maillart's "Les Dragons de Villars," and "Le Postillon de Longumeau," of Adolphe Adam, in addition to more recent works by M. Bazin and M. Massé, of Parisian fame. In the supply of opéra bouffe, which for several

years has been so far acclimatised in the metropolis that it has been p esented at no fewer than five or six houses at the same time, there is, it is satisfactory to note, a decided decline, and one of those miserable composite works, in which the music of a French composer is so unfairly wedded to a libretto of a character totally different to that for which it was written, recently proved, as it deserved, a complete failure. While this form of entertainment, which is for various reasons unworthy of support, is losing ground in public favour, opera in English is once more coming to the front, and under the energetic and efficient direction of Mr. Carl Rosa, at the Princess's Theatre, it has proved a decided success. Mr. Rosa acts on the principle that what is worth doing at all is worth doing well, and thus he engaged not only a body of eminent artistes, including Mr. Santley, Mr. Charles Lyall, and several English ladies, but he also secured a band and chorus of thoroughly able performers. It only remains to be noted in connection with the operatic history of the year that the first brick of Mr. Mapleson's new National Opera House on the Thames Embankment was laid by Mdlle. Titiens on the 7th of September, and that the house will, according to its architect, Mr. Fowler, be ready for use next season. Its dimensions and its internal arrangements will give it a claim to rank among the finest houses in Europe.

Foremost among the concerts of the year were the performances under the direction of Mr. Manns at the Crystal Palace. The programmes, twenty-six in number, included many new works of importance, and many works by the older masters, which were played for the first time in England. Among these we may mention:—A *Faust* overture, by Wagner; a concert overture, *Romeo and Juliet*, by H. H. Pierson; Herr Krebs' festival overture, "From Rhine to Elbe," and Rubinstein's overture to his earliest opera *Dmitri Donskoi;* Raff's symphony, "Leonore," in E; three movements from Benedict's symphony No. 2; Liszt's pianoforte concerto in A major No. 2; Brahms' "Hungarian Dances," scored for orchestra; Schumann's "Bilder aus Osten," arranged for orchestra by J. Reinecke; Bach's suite for orchestra in C; and Lachner's suite C, No. 6; Joachim's notturno in A for violin and orchestra; and Alfred Holmes' dramatic symphony "Jeanne d'Arc," for soprano and bass soli, chorus and orchestra. In addition to this goodly list many works, which had been already heard in England, were given for the first time at Sydenham. One of the features of the season was a concert in memory of Sterndale Bennett, at which the programme was drawn exclusively from his works, and included his "Wood Nymphs," "Parisian" and "Paradise and the Peri" overtures, and his pianoforte concerto in F minor. A similar honour was paid to the departed master by the directors of the Philharmonic Society, who gave at a memorial concert his "Woman of Samaria," and the overture and funeral march from his "Ajax," the latter of which had never been played before. Among the novelties of the season at the Society's concerts were

Raff's symphony in F, No. 3, op. 153, ("Im Walde,") and an Idyll written by Dr. Macfarren in memory of Sir Sterndale Bennett, in accordance with a commission from the directors. At Dr. Wylde's New Philharmonic Concerts, Liszt's pianoforte concerto in E flat was played by Miss Beesley, a pupil of Herr von Bülow, and Raff's "Leonore" symphony was given for the first time after its audition at Sydenham. Among the other orchestral concerts of the year, the long series of performances at the Royal Albert Hall, under the musical direction of Mr. Joseph Barnby, and under the management of Messrs. Novello and Co., deserve special mention. The scheme with which the season opened on the 7th of November was somewhat ambitious, including as it did a nightly concert, the various evenings of the week being successively devoted to different classes of music. The classical and sacred concerts were conducted by Mr. Barnby, the Wagner and modern German music by Mr. Dannreuther, and the English music by Mr. J. F. Barnett. Not only were the best known works of the great masters creditably performed by an orchestra of upwards of sixty performers, but a fair selection of novelties was provided, including Professor Oakeley's "Edinburgh March," Mr. Barnett's "Lay of the Last Minstrel," and Dr. Macfarren's Festival Overture, which had not been heard in London. Notwithstanding, however, the spirit with which these concerts were managed, they failed to secure the audiences necessary to make them a financial success, and after being continued every night up to Christmas, the number of performances was reduced to two in each week, while in time these bi-weekly performances also fell through. The cause of this apparent failure is not far to seek, and it cannot with any fairness be ascribed to a lack of public interest in high class music; rather it must be attributed to the long distance of the hall from the centre of the metropolis, and to the want of means of access to the building. These obstacles have in fact prevented the success of any of the schemes which have from time to time been adopted for the utilisation of the great *salle*, and go far to explain the melancholy condition of its exchequer, as disclosed at the last meeting of the directors. While, however, ordinary concerts fail in a hall of such gigantic size, it is well adapted for performances of special interest, and among those to which this description may be fairly applied was the production of Verdi's Manzoni Mass, which attracted enormous audiences. The composer conducted the work, and the quartet of chief vocalists was the same as on the occasion of its performance in Paris. Its success was sufficient to induce Messrs. Novello to arrange for its repetition, and the interest in it was fully maintained, although it was generally admitted to partake more of the character of operatic than of church music, a criticism, however, which was fairly met by the rejoinder that it was composed for a national rather than a purely ecclesiastical festival. The British Orchestral Society not only adhered to its rule of engaging English artistes, but also produced no fewer than five new compositions from the pens of

native writers, viz., a scena, "Saffo," for soprano with orchestral accompaniments, by Mr. Randegger; a symphony, No. 4, in C minor, by Mr. Alfred Holmes; an intermezzo and scherzo, by Mr. Gadsby; a descriptive overture, "The Tempest," by Mr. Hatton; a notturno in A minor, by Miss Florence Marshall; and a concert overture, by Mr. Wingham. The choral concerts of the year showed no original features, the Sacred Harmonic Society contenting itself with keeping to oratorios of established fame, while Mr. Leslie adhered to his usual system, and contented himself with the introduction of several new part songs.

In the English provinces, in Scotland, and in Ireland, considerable activity was manifested during the year. At Manchester Mr. Charles Hallé fully maintained the high reputation which his orchestral concerts have gained. At Liverpool Sir Julius Benedict once more directed the concerts of the local Philharmonic Society, and the popular pupil and friend of Weber also conducted the performances at the Norwich Festival. The programmes of the festival concerts in the cathedral town presented nothing worthy of note, the only important novelties promised in the prospectus not being produced. At Worcester, in the place of the Festival of the Three Choirs, conducted with full orchestra, and with a graduated scale of charges for admission to the Cathedral, a new system, or rather a return to the original scheme, was adopted after a strong opposition from a section of the townspeople and of the inhabitants of the county. The oratorio performances within the church were discontinued, and in their stead the Dean and Chapter provided a series of festival services, with elaborate compositions in the place of anthems, the "Three Choirs" still assisting, but without the accompaniment of an orchestra. Financially the festival was a complete success, and although the Dean and Chapter did not feel justified in engaging a band they expressly stated that it was not owing to any disinclination on their part to employ other instruments in addition to the organ.

In Scotland an effort was successfully made to engage an orchestra of first rate performers, and by arrangement they were enabled to perform in several of the large northern towns. The result was that concerts of a very high class were given, both at Edinburgh and Glasgow. The oratorios performed were Benedict's "St. Peter," and Haydn's "Seasons," both new to Edinburgh; and in addition many standard works, were produced for the first time in the northern capital. At the University of Edinburgh Professor Oakeley continued his earnest labours to promote musical culture not only among the students, but among the citizens. Three classes met weekly during term, the members being instructed in the pianoforte, organ playing, and harmony. The University Musical Society, of which Dr. Oakeley is the president and conductor, held its meetings every week, and a significant proof of its popularity is given in the fact that in the annual concert 150 students took part. In thus undertaking the direction of the Society the Professor was of course

going beyond the legal requirements of the Reid foundation, while he also continued his organ recitals, greatly to the satisfaction of the townspeople. The Edinburgh Musical Festival—the only music meeting of the kind in North Britain,—which owes its origin and vitality to Dr. Oakeley, took place as usual in February, with Mr. Charles Hallé's orchestra, and it was a noteworthy feature in the programmes that the vocal music was well worthy, both as regards selection and execution, to rank beside the instrumental, a remark which cannot always be made with justice even in our London concert rooms. Another striking illustration of the progress of musical taste and education north of the Tweed is furnished by the increased number of cases in which organs have been introduced into the churches of the Establishment and of the Free Kirk. Two of the most important instruments opened in 1875 were erected at Morningside, Edinburgh, and at Jedburgh.

In Ireland the concerts of the Philharmonic Society of Dublin, directed by Professor Stewart, deserve prominent notice. The University Choral Society, a strictly amateur choir, with a paid professional orchestra, gave an interesting series of concerts, and among other works included in its programmes were Sullivan's Festival Te Deum, and Handel's "Theodora" (both heard for the first time in Ireland; and two new cantatas from Sir Robert Stewart's pen—the first written specially in reference to the inner life of the University of Dublin, and the second, on a large scale, entitled "The Eve of St. John."

Space forbids any reference to the numerous other events of interest to musicians which occurred during the year, or to the progress of the art on the continent and in America. A line must suffice to record the presentation of handsome testimonials to Sir Julius Benedict and Sir John Goss, the former consisting of a magnificent piece of plate, engraved with designs from his operas, and the latter of the foundation at the Royal Academy of Music of a Goss scholarship, the first holder of which has been duly elected, after a competition conducted by the Council of the College of Organists. The death roll of the year included several eminent musicians, the first of them being Sir Sterndale Bennett, the principal of the Royal Academy of Music and Professor at the University of Cambridge. A worthy resting place for the remains of the eminent composer was found in Westminster Abbey, and the scene witnessed at his funeral, when nearly every musician of note stood round his grave, will not readily be forgotten. The scheme suggested shortly afterwards for the insertion of "A Musicians' Window" over his grave met with little encouragement; but Mr. H. F. Turle's effort to obtain funds for the restoration of the inscription on Purcell's monument has been more successful, and the work will shortly be executed. The year has witnessed the retirement of Mr. Turle from the active duties of the organistship of the Abbey, his place being taken by Dr. J. F. Bridge, of Manchester.

ENGLISH PHILANTHROPY IN 1875.

In the midst of the constant and progressive efforts which are being made in various quarters to economise charity, to bring the operations of societies under review, to check waste, and to expose fraud, it is satisfactory to find that there is no falling off in the measure of public liberality. In the earlier days of the system of enquiry into the working of our public institutions, which is now so generally adopted, there were not wanting persons who, from interested motives, or from an incapacity to estimate the results of a fair and honest criticism of the method on which the alms of the benevolent are expended, prophesied that the only result of such a proceeding would be to create a general distrust in the minds of the benevolent, and to lead them to withdraw, or, at any rate, to diminish their gifts; but this ominous prediction has been falsified by facts and figures, and instead of there being any falling off in the annual receipts, they seem, in the majority of cases, to increase rather than diminish. This is as it should be. Setting aside the constant rise in our population, which would alone require a corresponding increase in the resources of our great charities, it is painfully evident that the growth of civilisation, the race for wealth, and the pursuit of luxury, tend to feed rather than to check distress, and while the physiologist might cite cases to prove, as Mr. Gregg did in his essay on "Life at High Pressure," read last year at the Royal Institution, that the pace at which men live is in reality, and not in mere current phrase, "the pace that kills," so the philanthropist might show that the causes which promote the wealth and prosperity of the country, lead also directly or indirectly to the increase, not perhaps of what is termed hereditary pauperism, but of those cases of distress which it is the peculiar province of charity to seek out and relieve. Instances of this nature might easily be cited. Great commercial operations not always conducted, as recent events unhappily show, with the strictest integrity, bring great commercial panics if not failures in their train, and the inevitable result is the occurrence of many cases of sudden distress, following the collapse of resources long held to be perfectly secure. Again, increased opportunities of locomotion, enabling multitudes who would formerly have remained on their homesteads, to rove from country to country, naturally carry with them the possibilities of catastrophes which bereave families, and deprive children of all hope for the future, except from the aid of the benevolent. And lastly, the improvements in the various forms of industry, by the exposure of the workmen to noxious influences in the factory or the workshop, involve an increased liability to certain forms of disease, and a greater risk of injury, which necessarily intensify rather than remove the reasons for charitable effort. But while the function of charity can thus be shown to be as

clearly marked as ever, and while the field for its exercise is widening rather than contracting, it becomes daily more evident that the compression and centralisation, which some prominent reformers have sought to carry forward, is by no means unnecessary, and although the work they have undertaken is in itself both onerous and unpleasant, and frequently induces a collision with persons who are entitled to the highest respect, it is one of the most important duties which men of ability and discrimination can endeavour to discharge. Requiring the utmost delicacy and tact, calling into play the purest principles, and demanding at every turn the greatest watchfulness, lest in the desire to organise and systematise the free flow of kindliness should be in any way interfered with, it is a task worthy of men of the highest eminence, and it is a matter for congratulation that it has very largely fallen into the right hands. That the opposition to the process has been in many cases utterly groundless, is proved by a single illustration from a matter of every day experience in regard to the change which has come over our public thoroughfares, where beggars are now almost entirely unknown. That cases of real distress have, in consequence of the disappearance of the beggar, gone without relief, can scarcely be asserted, and it must, therefore, be admitted, that in this respect at least the efforts of the new school of philanthropists have been eminently successful. So, too, with regard to the exposure of worthless societies, it may be said that in nearly every case where prosecutions have been instituted, they have been richly deserved, and although, under the present state of the law, it is difficult to obtain a conviction where the fraudulent charity promoter has devoted a portion of his funds to the object for which he invited subscriptions, the publicity given to the proceedings has generally been sufficient to check if not entirely to put an end to his nefarious proceedings.

Turning from what is, from one point of view, the least inviting aspect of the subject to the actual work of the year, the expansiveness of English philanthropy is at once brought into prominence in the successful efforts made under the auspices of the Chief Magistrate of the City of London, to meet the exceptional distress caused by earthquake, famine, and flood in various parts of the world. As Canon Liddon said in his sermon on the auspicious occasion when the representatives of municipal government from the chief European nations met at St. Paul's Cathedral, it is to the Lord Mayor of London that Englishmen instinctively look at any time of public distress, or, in the presence of any great calamity, and, the preacher added with truth, they never look in vain. During the past year, for instance, no fewer than seven funds were in operation, each with its specific object, and each administered on the most catholic basis by a committee, including representatives of every religious body. It is indeed to this very general and comprehensive platform on which the Lord Mayor and his supporters are enabled to meet that the success of their efforts is largely to be attributed. The

funds to which reference has been made are—the French Inundations Relief Fund; the South American Earthquake Relief Fund; the Hungarian Inundation Relief Fund; the Iceland Relief Fund; the Famine in Asia Minor Relief Fund; the "Cospatrick" Relief Fund; and the Forest of Dean Inundation Relief Fund. The titles of these funds is alone sufficient to indicate the varied forms of distress which it is the object of the Mansion-House Committees to alleviate, and it is only just to add, that the sums entrusted to them are wisely and economically administered. For the Asia Minor Fund, upwards of 12,000*l.* was collected in London, and a similar amount in the aggregate was contributed by branch committees in Edinburgh, Glasgow, Liverpool, and Bradford. The Hungarian Relief Fund reached 1,114*l.* The French Fund reached the large amount of 26,497*l.*, and the committee were fortunate enough to secure for the superintendence of its distribution the services of Mr. John Furley and Captain Renwick, whose experience in the work of the Society for the Relief of Sick and Wounded in time of War made them admirable almoners. The "Cospatrick" Relief Fund, which was closed on the 9th of August last, amounted to 3,485*l.*; the Iceland Relief Fund to 2,468*l.*; the Forest of Dean Fund to 71*l.*; and the South American Fund to 1,853*l.*

The Metropolitan Hospital Sunday Collection was made on the 17th of June, with results slightly below those of the previous years, partly perhaps owing to the fact that the administration of the fund had been the subject of a considerable amount of angry discussion, not only in the newspapers but at public meetings. Ultimately, however, after a conference attended by representatives of the contributing congregations, the distribution was left as before in the hands of a committee fairly chosen from members of the different religious bodies. The Hospital Saturday collection took place for the second time on the 31st of July. The amount received was 5,343*l.*, but the outlay for its collection was 871*l.*, or more than 16 per cent. on the sum collected. It must, too, be added, that even the large expenditure announced in the previous year was increased in the new balance-sheet by a sum of 388*l.*

Turning from the special to the general charities, there are several new institutions to add to the record of previous years. The Cabmen's Shelter Fund has been firmly established, and the admirable "Shelters" erected by its promoters are to be seen on many of the metropolitan cab-stands. Whence once erected, the subscriptions charged for their use serve to pay the cost of the attendant who provides the men with tea and coffee, and other refreshments, at low charges. The boon which the Shelters have proved to the men is already gladly admitted by them, and when the system has borne the test of a winter season, there can be little question that the testimony in its favour will be materially increased. When it is remembered that there are between eleven and twelve thousand cabmen in London, this work, and that of

the Cabmen's Benevolent Association, will be recognised as eminently deserving of support. For the benefit of women working in all trades a "Protective and Provident League" has been recently established for the purpose of forming benefit and protection societies among women earning their own livelihood. Societies have been formed up to the present date in the following trades:—Book-binding, Dress-makers, Milliners, and Mantle-makers; Upholstresses; Shirt and Collar-makers; and Hat-makers. The League may fairly be regarded as a philanthropic institution, although it is scarcely a charity, its object being to encourage co-operation, and to stimulate the members to the adoption of provident habits. The proposed scheme, alluded to in the "Companion" for 1875, by which the seamen of the Royal Navy were to establish an annuity fund for the benefit of their widows, or of others dependent on them, has fallen through, owing to the opinion of Mr. Finlaison, the actuary, that it would be impossible to establish it on a permanent and safe basis at the low rate of payment which the men could afford to make from their wages. According to a statement made, on what we believe to be good authority, it is proved beyond doubt by Mr. Finlaison that the rate of subscription, viz., sixpence a month—would be altogether inadequate, it being his opinion that the subscription necessary to provide pensions of 24*l.* a-year, as proposed, would certainly be more than twenty times the amount suggested, and that even this rate of contribution, were it from ten to fifteen shillings a month, would have to be materially enhanced when the period of middle life was approached by the men. After such a decisive blow, the attempt at establishing a pension fund solely by means of subscriptions among themselves must be abandoned, as it would be impossible for them to set aside such a sum of money monthly as the demands made upon the fund would necessitate. But the Admiralty, being anxious that this praiseworthy desire on the part of our seamen and marines should not fall through altogether, has proposed the formation of a fund for granting gratuities to those who may be left almost unprovided for on the death of husbands, fathers, or sons. These gratuities would be graduated according to the age at which the subscriber joined the fund, while the monthly sixpence would provide gratuities to widows, orphans, and aged parents from 16*l.* downwards. The commanders-in-chief at the ports have been desired to make this known to the ships' companies under their command, and it now remains with the men to determine whether such a fund shall be established.

The formation of such funds as those alluded to may be regarded as the most beneficial result of modern philanthropic effort, and the work of the Provident Knowledge Society in this important particular deserves to be more generally known and more largely supported. The society endeavour by the circulation of little books, by the employment of lecturers, and by the promotion of penny banks and kindred institutions to encourage self-help, and as this ought to be the first and chief aim of the philanthropist, as

it is certainly the wisest and truest kindness to the poor, the society is worthy of all possible assistance. In the provision of healthy houses for the working classes, a work which is, we are glad to see, becoming sufficiently remunerative to induce rival companies to embark in it, much progress is being made; and the Shaftesbury Estate at Wandsworth and the Queen's Park Estate at Harrow-road are among the most striking illustrations of the success of the system. It is of course open to the objection that it tends indirectly to create class distinctions by erecting houses of a certain stamp, and by precluding the possibility of the erection of houses of a more costly nature, and this, although nothing more than has long been practically the rule in more fashionable quarters, is a principle which is foreign to English life, and which, if largely adopted, would be injurious to the country.

Among the special works of the year, undertaken for purely religious purposes, the mission of Messrs. Moody and Sankey, the American evangelists, deserves mention as an illustration of the readiness with which all forms of active Christian work are supported in this country. The balance-sheet published by the treasurer of the London Mission shows that the expense incurred by the operations of those gentlemen in the metropolis was 28,396*l.* The expenses are allotted thus :—The northern division (Agricultural, &c., Halls), 2,845*l.*; western (Opera House), 6,452*l.*; eastern (Bow-road Hall), 7,104*l.*; southern (Camberwell, &c.), 6,091*l.* The general expenses are set down at 5,993*l.*, and they include 850*l.* paid to "ministers and evangelists who assisted Mr. Moody," 320*l.* for "distribution of the *Christian* among ministers and others," and 2,850*l.* for chairs, which have since been sold for 1,270*l.* The public have already contributed 28,238*l.* towards the total required, mainly in the form of donations, of which 2,578*l.* have been received in sums ranging from 6*d.* to 550*l.* This immense expenditure, and the readiness with which the funds were supplied, prove unmistakably that earnestness can at any moment find very adequate support, even in our comparatively cold atmosphere. It is, at the same time, much to be deplored that in this branch of public philanthropy the gravest deception is often practised on the benevolent, and too great caution cannot be exercised in responding to the appeals for Home Missionary work, especially in the case of the system of house-to-house collections, which is not unfrequently carried forward without any authority.

The progress of charity organisation is sufficiently indicated by an abstract of the Charity Organisation Society's work for the past year. During the twelve months ending September 30th, 1875, the thirty-seven District Committees of the Charity Organisation Society dealt with 13,848 cases of alleged distress, exclusive of 5,111 vagrants and homeless persons. Of these, 5,513 were dismissed, 3,850 were recommended to legal and charitable agencies, and 4,485 were assisted by grants, loans, and employment, and in other ways. The Society has reason to congratulate itself on the fact of the Government having, so far as London is

concerned, embodied all the principal recommendations of its Special Committee on Dwellings in the Artisan and Labourers' Dwellings Act. During the past year a similar Special Committee, of representatives of institutions and associations for the blind has been formed by the Society, and has held numerous meetings, but has not yet reported. It is satisfactory to observe an increasing readiness on the part of the promoters, charities, and public bodies, to make use of the machinery of the Society. During the winter of 1873–4 an inquiry was conducted by it, at the request of the Royal Free Hospital, into the circumstances of the persons attending the out-patient department, and it has undertaken more recently, at the request of the Children's Hospital, Great Ormond-street, to verify the statements of all applicants to that institution for medical out-relief. Mr. Francis Peek, member of the London School Board, has promised to contribute 1,000*l.* a year for three years to the funds of the Society to facilitate the effectual dealing with such cases of distress as may be referred to the District Committees by the School Board Some progress is thus being made towards the division of labour in charitable work, and towards rendering relief remedial, whilst the continued tendency on the part of the Poor Law authorities to restrict out-relief, and the establishment of a National Penny Bank similar to the large Yorkshire Penny Bank which has succeeded so well under the auspices of Colonel Ackroyd, supply further evidence that a large section of the benevolent public is taking the true view of philanthropy and its aims. The retirement of Mr. Bosanquet from the office of secretary of the Society is greatly to be regretted, for its success has in no small degree been owing to the earnestness and ability with which he has discharged the responsible duties of the post, duties fairly described by Sir Charles Trevelyan as being equal to those of an important public department.

We may note, in conclusion, that the funds for the relief of prisoners for debt in the city of London, being no longer required for that purpose, owing to the alterations of the law, are, under the sanction of the Court of Chancery, to be applied to some of the most deserving of our metropolitan charities—the convalescent institutions and cottage homes, either at the seaside or in other health-giving spots, for the benefit of the poor of the great city. Well would it be if all our ancient endowments, when no longer required for their original objects, were to be thus devoted to schemes which it can scarcely be doubted would meet with the fullest approval from the benevolent donors.

TABLE OF ALL THE PUBLIC GENERAL ACTS

PASSED IN THE SECOND SESSION OF THE TWENTY-FIRST PARLIAMENT OF GREAT BRITAIN AND IRELAND,

38 AND 39 VICTORIÆ.

(The Acts are given in the order in which they were passed, the number denoting the chapter. An Abstract of those Acts distinguished by an asterisk is given in the pages following this table, which contain a classified epitome of the more important statutes passed during the year.)

1. An Act to apply the sum £882,661 8*s.* 11*d.*, out of the Consolidated Fund, to the service of the years ending the 31st of March, 1874, and 1875.

2. An Act to apply the sum of £7,000,000, out of the Consolidated Fund, to the service of the year ending the 31st of March, 1875.

3. An Act to make further provision with respect to the Salaries of the Magistrates of the Police Courts in the Metropolitan Police District.

(Repeals part of section 9 of 2 & 3 Vict. c. 71; Police Courts, Metropolis.
„ section 19 of 18 & 19 Vict. c. 126; Criminal Justice.
„ in part 35 & 36 Vict. c. 51; Judges' Salaries.)

4. An Act to amend the Superannuation Act, 1859, so far as relates to the Superannuation Allowances to be granted to Civil Servants who have served in unhealthy climates.

(Amends 22 Vict. c. 26.)

5. An Act to amend the Law relating to the Registry of Deeds Office, Ireland.

(Repeals part of section 35 of 2 & 3 Will. 4, c. 87.)

6. An Act to extend the Time for the Epping Forest Commissioners to make their Final Report.

(Amends 34 & 35 Vict. c. 93, 35 & 36 Vict. c. 95, and 36 & 37 Vict. c. 5, and extends time for making Commissioners' final report.)

7. An Act for punishing Mutiny and Desertion, and for the better payment of the Army and their Quarters.

(Applies 26 & 27 Vict. c. 57; Regimental Debts.
Amends 33 & 34 Vict. c. 67; Army Enlistment.)

8. An Act for the Regulation of Her Majesty's Royal Marine Forces while on shore.

9. An Act to repeal section eight of the Building Societies Act, 1874, and make other provision in lieu thereof.

(Repeals section 8 of 37 & 38 Vict. c. 42, and substitution of other provisions in lieu thereof.)

10. An Act to apply the sum of £15,000,000 out of the Consolidated Fund to the service of the year ending the 31st of March, 1876.

11. An Act to enable limited Owners to grant or demise Lands for Glebes in Ireland.

(Amends 18 & 19 Vict. c. 39, as to Leasing of Glebe Lands, and extends it to the late Established Church of Ireland.)

*12. An Act to amend the Law relating to International Copyright.

(Amends 15 & 16 Vict. c. 12, as to Dramatic Pieces.)

13. An Act to extend to the Docks, Custom Houses, Inland Revenue Offices, and Bonding Warehouses in England and Ireland certain provisions of The Bank Holidays Act, 1871, and to amend the same.

(Amends and extends 34 & 35 Vict. c. 17; Bank Holidays Act, 1871.)

*14. An Act to amend and continue certain Acts for the Preservation of the Peace in Ireland, and to grant an Indemnity in certain cases.

(Amends and repeals in part 33 & 34 Vict. c. 9, and 36 & 37 Vict. c. 24, Peace Preservation (Ireland), and 34 & 35 Vict. c. 25, Protection of Life and Property, &c.
„ 11 & 12 Vict. c. 2; Crime and Outrage (Ireland).
Continues 2 & 3 Vict. c. 74; Unlawful Oaths (Ireland), as amended by 11 & 12 Vict. c. 89.
Applies 14 & 15 Vict. c. 93; Petty Sessions (Ireland).)

15. An Act to amend the Sea Fisheries Act, 1868.

(Amends 31 & 32 Vict. c. 45.)

16. An Act to amend the Law relating to Regimental Exchanges.

(Exempts authorised Exchanges from provisions of Army Brokerage Acts, 5 & 6 Edw. 6, c. 16, and 49 Geo. 3, c. 126.)

17. An Act to amend the Law with respect to manufacturing, keeping, selling, carrying, and importing Gunpowder, Nitro-glycerine, and other explosive substances.

(Repeals 23 & 24 Vict. c. 139, 24 & 25 Vict. c. 130, 25 & 26 Vict. c. 98; Making, &c., and Carriage of Gunpowder and other Explosives, and Manufacture and Sale of Fireworks.
„ 29 & 30 Vict. c. 69; Carriage, &c., of Dangerous Goods.
32 & 33 Vict. c. 113; Importation and Carriage of Nitro-glycerine.
„ part of section 26 of 26 & 27 Vict. c. 65; Volunteer Act, 1863.
Extends section 29 of 18 & 19 Vict. c. 119, Passengers Act, and sections 23–27 of 36 & 37 Vict. c. 85, Merchant Shipping Act, to all Explosives.
Applies 35 & 36 Vict. c. 76, Coal Mines, and 35 & 36 Vict. c. 77. Metalliferous Mines, to Magazines used for Mines.
Saving for Rockets, &c., at Stations or on board ship in compliance with 17 & 18 Vict. c. 104, and for Storage of Gunpowder in any vessel moored in the River Mersey in pursuance of 14 & 15 Vict. c. 67.
Applies Commissioners Clauses Act, 1847, and Lands Clauses Act, 1845.
„ Public Health (Scotland) Act, 1867, and Public Health (Ireland) Act, 1874.)

18. An Act to provide for the establishment of a Close Time in the Seal Fishery in the Seas adjacent to the eastern coasts of Greenland.

(Establishes a close time for the Greenland Seal Fishery.)

*19. An Act for making perpetual the Bishops Resignation Act, 1869.

(Repeals section 16 of 32 & 33 Vict. c. 111, and makes said Act perpetual.)

20. An Act to amend the Laws relating to the Justices of the Police District of Dublin Metropolis.

(Amends 3 & 4 Vict. c. 108, and 7 & 8 Vict. c. 107, 14 & 15 Vict. c. 57, and 16 & 17 Vict. c. 55, as to the appointment of Justices of the Police District of Dublin Metropolis.)

21. An Act for amending the Law relating to Houses of Public Dancing, Music, or other Public Entertainment of the like kind, in the Cities of London and Westminster.

(Amends section 3 of 25 Geo. 2, c. 36.

Saves certain occasional licences granted under the Licensing Act, 1872.)

22. An Act for the further regulation of the Duties on Postage, and for other purposes relating to the Post Office.

(Recites Treaty, &c., for formation of a General Postal Union.

Repeals, in part, Post Office (Duties) Acts, 3 & 4 Vict. c. 96, 10 & 11 Vict. c. 85, 7 & 8 Vict. c. 49, 23 & 24 Vict. c. 65, 33 & 34 Vict. c. 79, and 34 & 35 Vict. c. 30.

Applies 7 Will. 4 and 1 Vict. c. 36; Post Office (Offences).

Savings for letters of soldiers and seamen.)

23. An Act to grant certain Duties of Customs and Inland Revenue, to alter other Duties, and to amend the Laws relating to Customs and Inland Revenue.

(Customs:—Customs Duties on Tea.

Taxes:—Income Tax and Inhabited House Duties; applies existing Income Tax Acts, and Valuation (Metropolis) Act, 1869.

Excise: Brewers' Licences; Medicine Licences; Wine Licences; Warehousing of Medicinal Spirits; Licence for Hired Carriages; Spirit, Grocers, and Beer Dealers Licences in Ireland.

Stamps:—Application of Stamp Act of 1870; and repeal of duties on appointment charged under 33 & 34 Vict. c. 97, and 35 & 36 Vict. c. 20, s. 3.)

24. An Act to amend the Law with reference to the Falsification of Accounts.

(Construes Act with 24 & 25 Vict. c. 96; Larceny Consolidation).

25. An Act to consolidate, with amendments, the Acts relating to the Protection of Public Stores.

(Applies 24 & 25 Vict. c. 110; Old Metal Dealers.

Incorporates portions of 24 & 25 Vict. c. 96; Larceny Consolidation.

(Amends section 45 of 28 & 29 Vict. c. 89; Greenwich Hospital.

Applies Summary Jurisdiction Acts, 11 & 12 Vict. c. 43, 14 & 15 Vict., c. 93, and 27 & 28 Vict. c. 53.

Repeals so much as is unrepealed of 9 & 10 Will. 3, c. 41, and 9 Geo. 1, c. 8, Public Stores; section 10 of 17 Geo. 2, c. 40, Public Stores; 39 & 40 Geo. 3, c. 89, 54 Geo. 3, c. 60, 55 Geo. 3, c. 127, Naval and other Public Stores; section 10 of 54 Geo. 3, c. 159, Dockyards, &c.; in part, 30 & 31 Vict. c. 128, War Department Stores; 32 & 33 Vict. c. 12, Naval Stores.)

26. An Act to amend the Law of Bankruptcy in Scotland.

(Repeals section 122 of 19 & 20 Vict. c. 79, as to Wages of Workmen, &c.)

*27. An Act to extend to the surviving Children of poor Widows the benefits of the Act 36th and 37th Victoria, chapter 52, intituled

"An Act for the Relief of Widows and Children of Intestates where the personal estate is of small value."

(Extends 36 & 37 Vict. c. 52, to children of poor Intestate Widows.)

28. An Act to amend the Law respecting the Superannuation Allowances of certain Officers of the Staff of the Metropolitan Police.

(Repeals section 21 of 2 & 3 Vict. c. 47; Metropolitan Police.
Explains 4 & 5 Will. 4, c. 24, and 22 Vict. c. 46; Superannuation Acts, 1834 and 1859.)

29. An Act to continue the Endowed Schools Act, 1868.

(Continues 31 & 32 Vict. c. 32; Endowed Schools Act, 1868.)

30. An Act to amend the Glebe Loan (Ireland) Amendment Act, 1871.

(Amends section 14 of 34 & 35 Vict. c. 100.)

31. An Act to make perpetual Section Four of the Railway Companies Act, 1867, and Section Four of the Railway Companies (Scotland) Act, 1867.

(Makes perpetual section 4 of 30 & 31 Vict. c. 127, and section 4 of 30 & 31 Vict. c. 126, as to liability of rolling stock, &c.)

32. An Act to continue for Ten Years the Survey (Great Britain) Acts.

(Continues Ordnance Survey Acts, 4 & 5 Vict. c. 30, and 33 & 34 Vict. c. 13, for ten years.)

33. An Act to amend the Metropolis Management Acts.

(Amends 18 & 19 Vict. c. 120, and Acts amending the same, as to certain Assessments for Sewers.
„ 32 & 33 Vict. c. 67; Valuation (Metropolis).)

34. An Act to amend the Acts relating to the Ecclesiastical Commissioners, and enable them to carry into effect a certain proposal for the re-arrangement of the Dioceses of London, Winchester, and Rochester, and the erection of a new Bishopric of Saint Albans.

(Amends Acts relating to the Ecclesiastical Commissioners; and repealing all Enactments inconsistent with this Act, or with any Order in Council made thereunder.)

35. An Act for the further Amendment of the Laws relating to Turnpike Roads in South Wales.

(Amends 7 & 8 Vict. c. 91; Turnpike Trusts (South Wales).)

*36. An Act for facilitating the Improvement of the Dwellings of the Working Classes in Large Towns.

(Amends Lands Clauses Acts, 1845 and 1860.
Applies Lands Clauses Acts, 1845 and 1860, as so amended.
„ (as to Ireland) Lands Clauses Acts, 1845 and 1860.
„ „ Railways Acts, 1851, 1860, 1864, and Railways Traverse Act.
„ Public Health Act, 1872, and Public Health (Ireland) Act, 1874.
„ Commissioners Clauses Act, 1847.
„ Metropolis Works (Loans) Act, 1869.
Defines relation of local Acts to general Acts.)

37. An Act to amend the Law relating to Juries in Ireland.

(Continues and amends certain provisions of 36 & 37 Vict. c. 27.)

38. An Act to remove certain doubts with respect to the powers of the Parliament of Canada under section eighteen of the British North America Act, 1867.

(Repeals section 18 of 30 & 31 Vict. c. 3; British North America Act, 1867, and new provisions substituted.
Confirms Act of Parliament of Canada, 31 & 32 Vict. c. 24.)

39. An Act to amend the provisions of the Metalliferous Mines Regulation Act, 1872, with respect to the annual Returns from Mines.

(Repeals section 10 of 35 & 36 Vict. c. 77, as to return by owner or agent, and new provisions substituted.)

*40. An Act to amend the Law regulating Municipal Elections.

(Amends 35 & 36 Vict. c. 33; Ballot Act, 1872.
Repeals in part Municipal Corporations Acts, 5 & 6 Will. 4, c. 76, and 22 Vict. c. 35, as to Elections.
„ sections 6 and 7 of 32 & 33 Vict. c. 55; Municipal Franchise.
Amends section 11 of 16 & 17 Vict. c. 79, as to Elections on Vacancies.)

41. An Act for the relief of Widows and Children of Intestates in Scotland where the personal estate is of small value.

(Applies 21 & 22 Vict. c. 56; Confirmation of Executors.)

42. An Act to enable certain Corporate Bodies to hold Land for Glebes in Ireland.

(Amends 32 & 33 Vict. c. 42; Irish Church Act, 1869.
„ 33 & 34 Vict. c. 46; Landlord and Tenant (Ireland) Act, 1870.
„ section 72 of 3 & 4 Will. 4, c. 37, section 20 of 4 & 5 Will. 4, c. 90; Church Temporalities (Ireland).)

43. An Act to amend the Medical Acts so far as relates to the Royal College of Surgeons of England.

(Amends 21 & 22 Vict. c. 90, and Acts amending the same.)

44. An Act to amend The Constabulary (Ireland) Act, 1874.

(Amends 37 & 38 Vict. c. 80.)

*45. An Act to amend the Law with respect to the Reduction of the National Debt and the Charge for the National Debt in the Consolidated Fund.

(Amends 29 & 30 Vict. c. 39; Exchequer and Audit.
„ 33 & 34 Vict. c. 71; National Debt.)

46. An Act to amend an Act passed in the Session of Parliament held in the 30th and 31st years of the Reign of Her present Majesty, intituled "An Act to afford further Facilities for the Erection of certain Bridges in Ireland."

(Amends 30 & 31 Vict. c. 50; Applies 4 & 5 Will. 4, c. 61; } Bridges (Ireland).
„ 2 & 3 Vict. c. 50; Public Works (Ireland).)

47. An Act to amend the Law in regard to Constables and Peace Officers in Scotland.

(Prohibits Constables appointed under Scottish Acts, 1617, 1633, and 1661, from exercising powers of Constables under 25 & 26 Vict. c. 114; Poaching Prevention Act, 1862.)

48. An Act to make further Provision respecting the Contribution out of Moneys provided by Parliament towards the Expenses of the Police Force in the Metropolitan Police District, and elsewhere in Great Britain.

(Recites 19 & 20 Vict. c. 69; 20 & 21 Vict. c. 72, and 31 & 32 Vict. c. 67, and repeals so much of any Act as limits amount of Contributions by Treasury to Police Force.)

49. An Act for facilitating the Improvement of the Dwellings of the Working Classes in large Towns in Scotland

(Amends and applies Lands Clauses Consolidation (Scotland) Act, 1845.

Applies Public Health (Scotland) Act, 1867.

Defines relation of local Acts to general Acts.)

*50. An Act to amend the Acts relating to the County Courts.

(Repeals part of section 62, and the whole of sections 85 and 103 of 9 & 10 Vict. c. 95: sections 28 and 29 of 19 & 20 Vict. c. 108; sections 6 and 7 of 29 & 30 Vict. c. 4; sections 2 and 32 of 30 & 31 Vict. c. 142; section 29 of 31 & 32 Vict. c. 71.)

51. An Act to amend the Act of the Session of the 35th and 36th years of the reign of Her present Majesty, chapter 19, intituled "An Act for the prevention and punishment of criminal outrages upon natives of the islands in the Pacific Ocean."

(Amends, and in part repeals, 35 & 36 Vict. c. 19, and includes Fiji in the definition of "Australian Colonies.")

52. An Act to provide for the completion of the distribution of the sums of money paid to Her Majesty by the United States of America on account of Awards made by the Commissioners acting under a certain Treaty between Her Majesty and the United States of America.

(Empowers Treasury to pay balance of claims under Washington Treaty of 1871 in the Court of Chancery.

Applies 10 & 11 Vict. c. 96; Trustees Act, 1867.)

53. An Act to give effect to an Act of the Parliament of the Dominion of Canada respecting Copyright.

(Gives effect to an Act of the Parliament of Canada (38 Vict.) respecting Copyright.)

*54. An Act to amend the Qualification required by Persons acting as Justices of the Peace.

(Amends 18 Geo. 2, c. 20.)

*55. An Act for consolidating and amending the Acts relating to Public Health in England.

(Repeals the following enactments (but certain sections in the Acts marked thus (*) are re-enacted by this Act); viz.:—

Public Health, *11 & 12 Vict. c. 63, wholly, *35 & 36 Vict. c. 79, wholly, except as relates to the Metropolis.

Public Health Supplemental, 12 & 13 Vict. c. 94, 13 & 14 Vict. c. 90, 15 & 16 Vict. c. 42, in part.

Local Government, *21 & 22 Vict. c. 98, *24 & 25 Vict. c. 61, *26 & 27 Vict. c. 17, wholly.

Common Lodging Houses, 14 & 15 Vict. c. 28, 16 & 17 Vict. c. 41, wholly, except as relates to the Metropolitan Police District.

Nuisances Removal and Diseases Prevention, 18 & 19 Vict. cc. 116, 121, 23 & 24 Vict. c. 77, 26 & 27 Vict. c. 117, 29 & 30 Vict. c. 51, wholly, except as relates to the Metropolis.

Sewage Utilization, 28 & 29 Vict. c. 75, 30 & 31 Vict. c. 113, wholly, except as relates to Scotland or Ireland.

Sanitary Act, 1866, *29 & 30 Vict. c. 90, (Parts I, II, III,) except as relates to the Metropolis, or to Scotland or Ireland.

Sanitary Acts, 1868, 1869, 1870, 1873, 31 & 32 Vict. c. 115, 32 & 33 Vict. c. 100, 33 & 34 Vict. c. 53, wholly, except as relates to the Metropolis; 37 & 38 Vict. c. 89, wholly, except as relates to the Metropolis, or Metropolitan Police District.

Supersedes (in certain cases) Watching and Lighting Act, 3 & 4 Will. 4, c. 90.

Amends section 90 of 5 & 6 Will. 4, c. 76; Municipal Corporations.

Applies Bakehouse Regulation Act, 26 & 27 Vict. c. 40; Artisans and Labourers Dwellings Act, 31 & 32 Vict. c. 130; Baths and Washhouses Acts, 9 & 10 Vict. c. 74; 10 & 11 Vict. c. 61; Labouring Classes Lodging Acts, 14 & 15 Vict. c. 34, 29 & 30 Vict. c. 28, 30 & 31 Vict. c. 28; Summary Jurisdiction Acts, 11 & 12 Vict. c. 43, &c.; Improvement of Land Act, 27 & 28 Vict. c. 114; Waterworks Clauses Acts, 1847 and 1863, 10 & 11 Vict. c. 17, and 26 & 27 Vict. c. 19; Towns Improvement Clauses Act, 1847, 10 & 11 Vict. c. 34; Markets and Fairs Clauses Act, 10 & 11 Vict. c. 14; Towns Police Clauses Act, 1847, 10 & 11 Vict. c. 89; Lands Clauses Acts, 1845, 1860, 1869.)

56. An Act to enable Grand Juries in Ireland to grant Superannuation Allowances to County Surveyors in certain cases.

(Applies Superannuation Act, 1859 (22 Vict. c. 26).)

57. An Act to institute a Pharmaceutical Society, and to regulate the Qualifications of Pharmaceutical Chemists and of Chemists and Druggists, in Ireland.

(Amends Irish Act of 1791 (31 Geo. 3).

Applies Petty Sessions (Ireland) Act, 1851.)

58. An Act to authorise Advances to the Public Works Loan Commissioners for enabling them to make Loans under divers Acts authorising such Loans.

59. An Act to amend the Public Records (Ireland) Act, 1867, and to make provision for keeping safely Parochial Records in Ireland.

(Amends 30 & 31 Vict. c. 70.)

*60. An Act to consolidate and amend the Law relating to Friendly and other Societies.

(Repeals 18 & 12 Vict. c. 63, 21 & 22 Vict. c. 101, 23 & 24 Vict. c. 13, 23 & 24 Vict. c. 58 (Friendly Societies); 29 & 30 Vict. c. 34 (Societies for Insurance of Animals); section 41 of 52 Geo. 3, c. 38, section 39 of 52 Geo. 3, c. 68; section 44 of 17 & 18 Vict. c. 105, section 69 of 17 & 18 Vict. c. 106, section 27 of 17 & 18 Vict. c. 107 (Militia—Members of Friendly Societies), section 23 of 22 & 23 Vict. c. 40, section 44 of 26 & 27 Vict. c. 65, section 33 of 36 & 37 Vict. c. 77 (Yeomanry and Volunteer Force—Members of Friendly Societies).

Applies Summary Jurisdiction and Procedure Acts and Petty Sessions (Ireland) Acts; 20 Geo. 2, c. 43, and 38 & 39 Vict. c. 62, as to Appeals in Scotland; 26 & 27 Vict. c. 87, Savings Banks.)

61. An Act to further amend the Law of Entail in Scotland.

(Amends Act of Scottish Parliament, 1685, 11 & 12 Vict. c. 36, 5 Geo. 4, c. 87.)

62. An Act to alter and amend the Law relating to Appeals in Summary Prosecutions before Inferior Judges in Scotland.

(Amends 20 Geo. 2, c. 43.

Applies Summary Procedure Act, 1864.)

*63. An Act to repeal the Adulteration of Food Acts, and to make better provision for the Sale of Food and Drugs in a pure state.

(Repeals 23 & 24 Vict. c. 84, section 24 of 31 & 33 Vict. c. 121, section 3 of 33 & 34 Vict. c. 26, 35 & 36 Vict. c. 74; Adulteration of Food and Drugs.

Applies Summary Jurisdiction and Procedure Acts, and Petty Sessions (Ireland) Acts.)

64. An Act to repeal the Guarantee by Companies Act, 1867, and to make other provision in lieu thereof.

(Repeals 30 & 31 Vict. c. 108; Guarantee by Companies.)

65. An Act for further amending the Acts relating to the raising of Money by the Metropolitan Board of Works, and for other purposes.

(Amends 32 & 33 Vict. c. 102, and 34 & 35 Vict. c. 47; Metropolitan Board of Works (Loans) Acts, 1869 and 1871.

Applies Metropolis Management Acts, 1855 and 1862.

„ Fire Brigade Act, 1865.)

66. An Act for further promoting the Revision of the Statute Law by repealing certain Enactments which have ceased to be in force or have become unnecessary.

(Repeals (with Savings) the Enactments described in the Schedule.

Repeals 26 Geo. 3, c. 84; Consecration of Bishops abroad.

Revives 9 Geo. 4, c. 58, s. 25 (repealed by Statute Law Revision Act, 1873.)

67. An Act to amend the Laws relating to Private and District Lunatic Asylums in Ireland.

(Amends and makes perpetual 5 & 6 Vict. c. 123, 8 & 9 Vict. c. 107, and 37 & 38 Vict. c. 74; Private Lunatic Asylums, Ireland.

„ 1 & 2 Geo. 4, c. 33; Pauper and Criminal Lunatics, Ireland.

„ 1 & 2 Vict. c. 27; Custody of Insane Persons (Ireland).

„ 30 & 31 Vict. c. 18, s. 10; District Lunatic Asylums (Ireland).

Applies 34 & 35 Vict. c. 22; Lunacy Regulation (Ireland).

„ Petty Sessions (Ireland) Act, 1851.)

68. An Act for making further Provision respecting the Department of Science and Art.

69. An Act to consolidate and amend certain Laws relating to the Militia of the United Kingdom.

(Repeals (with Savings) the following Enactments, wholly or in part; viz.—

Relating to the United Kingdom, Great Britain or England:—

43 Geo. 3, c. 47, 46 Geo. 3, cc. 90, 140, 53 Geo. 3 c. 81, 55 Geo. 3, c. 168, 56 Geo. 3, c. 64, 57 Geo. 3, c. 57, 10 Geo. 4, c. 10, 2 & 3 Vict. c. 59, 17 & 18 Vict. c. 13, 18 & 19 Vict. cc. 1, 100, 22 & 23 Vict. c. 38, 32 & 33 Vict. c. 13, 33 & 34 Vict. c. 68, wholly; and 37 Geo. 3, c. 25, 42 Geo. 3, cc. 72, 90, 51 Geo. 3, cc. 114, 118, 55 Geo. 3, c. 65, 15 & 16 Vict. c. 50, 17 & 18 Vict. c. 105, 23 & 24 Vict. c. 94, 36 & 37 Vict. c. 68, in part; repeals Acts relating to Scotland 49 Geo. 3. c. 90, wholly, and 42 Geo. 3, c. 91, and 17 & 18 Vict. c. 106, in part; repeals Acts relating to Ireland 51 Geo. 3, c. 78, 52 Geo. 3, c. 28, 54 Geo. 3, c. 179, 18 & 19 Vict. c. 19, wholly; and 49 Geo. 3, c. 120, 52 Geo. 3, c. 29, 53 Geo. 3, c. 48, 53 Geo. 3, c. 154, 1 & 2 Will. 4, c. 17, 17 & 18 Vict. c. 107, in part.

Applies Mutiny Acts and Articles of War; Summary Proceedings

and Small Penalties Acts; also Petty Sessions (Ireland) and Small Penalties (Ireland) Acts.)

70. An Act for further amending the Law relating to Chimney Sweepers.

(Amends 3 & 4 Vict. c. 85, and 27 & 28 Vict. c. 37.)

71. An Act to amend the Act of the 29th and 30th years of Her Majesty, chapter 111, relating to the Ecclesiastical Commissioners for England.

(Amends 29 & 30 Vict. c. 111.)

72. An Act to continue various expiring Laws.

(Continues the following Acts, and Acts amending the same); viz.:—

5 & 6 Will. 4, c. 27; Linen, &c., Manufactures (Ireland).
3 & 4 Vict. c. 89; Poor Rates (Stock in Trade Exemption).
4 & 5 Vict. c. 35; Copyhold, &c., Commissions.
4 & 5 Vict. c. 59; Application of Highway Rates.
10 & 11 Vict. c. 32; Landed Property Improvement (Ireland).
10 & 11 Vict. c. 98; Ecclesiastical Jurisdiction.
11 & 12 Vict. c. 32; County Cess (Ireland).
11 & 12 Vict. c. 107; Sheep and Cattle Diseases.
14 & 15 Vict. c. 104; Episcopal, &c., Estates.
17 & 18 Vict. c. 102; Corrupt Practices Prevention.
23 & 24 Vict. c. 19; Dwellings for Labouring Classes (Ireland).
24 & 25 Vict. c. 109; Salmon Fishery (England).
25 & 26 Vict. c. 97; Salmon Fisheries (Scotland).
26 & 27 Vict. c. 105; Promissory Notes.
27 & 28 Vict. c. 9; Malt for Animals.
27 & 28 Vict. c. 20; Promissory Notes, &c. (Ireland).
28 & 29 Vict. c. 46; Militia Ballots Suspension.
28 & 29 Vict. c. 66; Malt Duty.
28 & 29 Vict. c. 83; Locomotives on Roads.
29 & 30 Vict. c. 52; Prosecution Expenses.
31 & 32 Vict. c. 125; Election Petitions, &c.
32 & 33 Vict. c. 21; Election Commissioners' Expenses.
34 & 35 Vict. c. 87; Sunday Observance Prosecutions.
34 & 35 Vict. c. 105; Petroleum.)

73. An Act to amend the Law relating to the appointment of certain persons who entered the employment of the Home Government of India before the 31st day of December, 1874.

(Amends 21 & 22 Vict. c. 106; Government of India.)

74. An Act to amend "The Public Health (Scotland) Act, 1867," and other Sanitary Acts, in respect of Loans for Sanitary Purposes.

(Amends 30 & 31 Vict. c. 101; 34 & 35 Vict. c. 38; } Public Health (Scotland).
„ 25 & 26 Vict. c. 101; General Police and Improvement (Scotland).)

75. An Act to amend the Contagious Diseases (Animals) Act, 1869.

(Amends 32 & 33 Vict. c. 70.)

76. An Act to make provision for Returns relating to Ecclesiastical Fees, and for other purposes.

(Amends 7 & 8 Vict. c. 68; 10 & 11 Vict. c. 98; } Ecclesiastical Jurisdiction.)

*77. An Act to amend and extend the Supreme Court of Judicature Act, 1873.

(Amends and repeals in part 36 & 37 Vict. c. 66.
„ 32 & 33 Vict. c. 37; Common Pleas, Lancaster.
„ 35 & 36 Vict. c. 44; Court of Chancery Funds.
„ 16 & 17 Vict. c. 70; Lunacy Regulation.
Repeals section 7 of 6 Geo. 4, c. 84; Common Pleas, &c.
„ part of section 116 of 32 & 33 Vict. c. 71; } Bankruptcy.)
„ „ „ 19 of 32 & 33 Vict. c. 83; }

78. An Act to apply a sum out of the Consolidated Fund to the service of the year ending the 31st day of March, 1876, and to appropriate the Supplies granted in this Session of Parliament.

79. An Act to amend the Law relating to Legal Practitioners.
(Amends 6 & 7 Vict. c. 73; Attorneys and Solicitors.)

*80. An Act to amend the Act of the 21st year of the reign of King George the Third, chapter 49, intituled "An Act for preventing certain abuses and profanations on the Lord's Day called Sunday," and for further amending the Law concerning the remission of penalties.
(Amends 21 Geo. 3, c. 49; Sunday Entertainments.)

81. An Act to authorise the payment out of the Consolidated Fund of the United Kingdom of the Salary of an additional Sheriff Substitute in Scotland; and for other purposes.

82. An Act to afford facilities for the erection, enlargement, improvement, and purchase of dwelling-houses for Residences for Teachers of certain National Schools in Ireland.
(Applies Public Works Acts, 29 & 30 Vict. c. 40 (and the Acts therein recited), and 24 & 25 Vict. c. 71.)

83. An Act to amend the Law relating to Securities for Loans contracted by Local Authorities.
(Repeals 36 & 37 Vict. c. 35; County Debentures.
Applies 24 & 25 Vict. c. 98; Forgery.)

*84. An Act to regulate the Expenses and to control the Charges of Returning Officers at Parliamentary Elections.
(Amends 35 & 36 Vict. c. 33; Ballot Act, 1872.)

85. An Act for amending the Foreign Jurisdiction Acts.
(Amends 6 & 7 Vict. c. 94, and Acts amending the same.)

86. An Act for amending the Law relating to Conspiracy, and to the Protection of Property, and for other purposes.
(Repeals 34 & 35 Vict. c. 32, Criminal Law (Violence, Threats, &c.); in part 30 & 31 Vict. c. 141, Master and Servant; the following enactments as to Breaches of Contract and Recovery of Wages, viz., 5 Eliz. c. 4; part of section 2 of 12 Geo. 1, c. 34; section 20 of 5 Geo. 3, c. 51; 19 Geo. 3, c. 49; sections 18 and 23 of 3 & 4 Vict. c. 91; section 17 of 6 & 7 Vict. c. 40; section 7 of 8 & 9 Vict. c. 128.
Applies Summary Jurisdiction and Procedure Acts and Petty Sessions (Ireland) Acts, and 20 Geo. 2, c. 43, as to Appeals in Scotland.)

87. An Act to simplify Titles and facilitate the Transfer of Land in England.
(Amends 25 & 26 Vict. c. 53; Land Registry Act, 1862.
„ 37 & 38 Vict. c. 78; Vendor and Purchaser.
Applies Trustees Act, 1860.)

*88. An Act to make provision for giving further powers to the Board of Trade for stopping unseaworthy Ships.
(Amends Merchant Shipping Acts, 1854, 1871, and 1873.)

89. An Act to consolidate with Amendments the Acts relating to Loans for Public Works.

(Repeals the following Acts relating to Loans for Public Works :— 57 Geo. 3, cc. 34, 124 ; 1 Geo. 4, c. 60 ; 3 Geo. 4, c. 86 ; 5 Geo. 4, cc. 36, 77 ; 6 Geo. 4, c. 35 ; 7 & 8 Geo. 4, c. 47 ; 1 & 2 Will. 4, c. 24 ; 3 & 4 Will. 4, c. 32 ; 4 & 5 Will. 4, c. 72 ; 7 Will. 4, and 1 Vict. c. 51 ; 1 & 2 Vict. c. 88 ; 3 & 4 Vict. c. 10 ; 5 & 6 Vict. c. 9 ; 9 & 10 Vict. cc. 80, 83 ; 12 & 13 Vict. c. 86 ; 14 & 15 Vict. c. 23 ; 16 & 17 Vict. c. 40 ; 19 & 20 Vict. c. 17 ; 24 & 25 Vict. c. 80 ; 25 & 26 Vict. c. 30 ; 29 & 30 Vict. c. 72 ; 30 & 31 Vict. c. 32 ; 35 & 36 Vict. c. 71 ; 36 & 37 Vict. c. 49.)

*90. An Act to enlarge the powers of County Courts in respect of disputes between Employers and Workmen, and to give other Courts a limited civil jurisdiction in respect of such disputes.

(Applies Summary Jurisdiction Acts and Petty Sessions (Ireland) Acts.)

*91. An Act to establish a Register of Trade Marks.

92. An Act for amending the Law relating to Agricultural Holdings in England.

(Applies Crown Lands Act, 1866 ; also Duchy of Lancaster Lands Act, 1855, and Duchy of Cornwall Management Act, 1863.)

93. An Act to amend the Copyright of Designs Acts.

(Amends 5 & 6 Vict. c. 100, 6 & 7 Vict. c. 65, 13 & 14 Vict. c. 104, 21 & 22 Vict. c. 70, and 24 & 25 Vict. c. 73. Powers and Duties of Board of Trade under those Acts transferred to Commissioners of Patents.)

94. An Act to amend the Law relating to Offences against the Person.

(Amends 24 & 25 Vict. c. 100, as to Carnal Knowledge of Girls under 12, and above 12 and under 13.)

95. An Act to amend an Act passed in the Session of Parliament held in the 33rd and 34th years of the reign of Her present Majesty, chapter 106, intituled " An Act to amend the Sanitary Act, 1866, so far as relates to the City of Dublin."

(Amends 33 & 34 Vict c. 106, as to Loan from Public Works Loans Commissioners.)

96. An Act to provide for additional payments to Teachers of National Schools in Ireland.

ABSTRACTS OF IMPORTANT ACTS

PASSED IN THE SECOND SESSION OF THE TWENTY-FIRST PARLIAMENT OF GREAT BRITAIN AND IRELAND.

1. CHURCH.

BISHOPS' RESIGNATION.

[38 and 39 Victoriæ, cap. 19.—14th June, 1875.]

An Act for making perpetual the Bishops' Resignation Act, 1869.

The preamble recites that, whereas by section 16 of the Act of 1869, it was only to remain in force for two years, and further until the end of the next ensuing session of Parliament, and so it was continued for three years from the end of 1872, and whereas it is expedient that the said Act should be made perpetual, the section (No. 16) limiting its operation is hereby repealed, and the Act is made perpetual.

BISHOPRIC OF ST. ALBANS.

[38 and 39 Victoriæ, cap. 34.—29th June, 1875.]

An Act to amend the Acts relating to the Ecclesiastical Commissioners, and enable them to carry into effect a certain proposal for the re-arrangement of the Dioceses of London, Winchester, and Rochester, and the erection of a new Bishopric of Saint Albans.

The preamble recites the expediency of providing increased episcopal supervision in the counties adjoining the Metropolis, both north and south of the Thames, and especially in the county of Surrey; and that, with a view to its provision, an arrangement is proposed for the formation of a new bishopric to consist of the counties of Hertford and Essex, which are to be taken away from the diocese of Rochester, and in place of which is to be added to that diocese the district south of the Thames, including a large part of the county of Surrey at present in the diocese of Winchester. The preamble further recites that the Bishop of Winchester, in order to further this object, has assented to the sale of the episcopal residence in London, attached to his bishopric, and to the application of the proceeds of such sale as a basis for an endowment of the bishopric of St. Albans. Section 1 gives the short title of the Act as "The Bishopric of St. Albans Act," 1875. Section 2 empowers the Ecclesiastical Commissioners to sell the Bishop of Winchester's London house, and apply the proceeds, after deducting the expenses of the sale, to a fund to be called the St. Albans Bishopric Endowment Fund. Section 3 empowers the Commissioners to receive public contributions for the same object. Section 4 provides for the establishment of the bishopric when the Commissioners certify to Her Majesty that the Endowment Fund produces a net income of 2,000*l.* a year, exclusive of any episcopal residence or money appropriated for the provision of such a residence, and enacts that Her Majesty, by Order in Council, may found the bishopric with a diocese consisting of the counties of Hertford and Essex, and of that part of the county of Kent which lies north of the River Thames, or of such parts thereof as to Her Majesty may seem meet, and may assign to such bishopric as a cathedral church the abbey

church of St. Albans, in the county of Hertford, but subject to the rights of the incumbent of such church, and may declare the time at which such Order founding such new bishopric is to come into operation. The section also provides that Her Majesty, by the same or any other Order in Council, may constitute the Bishop of St. Albans a body corporate, and may invest such bishop with all such rights, privileges, and jurisdictions as are now possessed by any other bishop in England, or such of them as to Her Majesty may seem meet, and may subject such bishop to the metropolitan jurisdiction of the Archbishop of Canterbury. Section 5 provides for the re-arrangement of the diocese of Rochester by the transference to it of all such parishes situate wholly or partly in the Parliamentary divisions of East Surrey and Mid Surrey as now form part of the diocese of Winchester; and also all such parishes in Surrey as now form part of the diocese of London. Section 6 provides that, subject to the rights of the persons, who, at the passing of this Act, are bishops of Winchester and Rochester, such a portion of the endowment or income of these as is to be transferred to the St. Albans Bishopric Endowment Fund as will yield a net annual sum of 500*l.* a year in such case. Section 7 enacts that the number of bishops sitting in Parliament is not to be increased by the creation of the new bishopric, the occupant of which is only to accede to a seat in the House of Lords according to priority of consecration when a vacancy occurs in any other see except that of Canterbury, York, London, Durham, or Winchester. Section 8 empowers the Queen to appoint the Bishop of St. Albans, so long as there is no dean and chapter of St. Albans, in the same manner as if a dean and chapter had failed to elect a bishop in accordance with the licence and letters missive of Her Majesty, but after the foundation of a dean and chapter the bishopric of St. Albans is to be filled in the same manner as in the case of any other bishopric in England. Section 9 provides for the creation and re-arrangement of courts, officers, archdeaconries, &c., consequent upon the creation of the new see. Section 11 provides for the sale of Danbury Palace by the Ecclesiastical Commissioners at anytime after the passing of this Act, and for the application of the proceeds of such sale to the provision in the county of Surrey of a suitable residence for the Bishop of Rochester, any surplus being carried to the fund for providing a residence for the Bishop of St. Albans. Section 13 provides that the St. Albans Bishopric Endowment Fund shall be held by the Commissioners upon trust to provide a net annual income not exceeding 4,500*l.* a year, and a residence for the Bishop of St. Albans, and subject upon trust for the foundation of a dean and chapter for the bishopric of St. Albans, in such manner as may be from time to time provided by Order of Her Majesty in Council; but there is not to be assigned as an endowment to the said bishopric, exclusive of an episcopal residence, a greater extent of land than will, after deducting the costs of management, produce as nearly as may be a net annual income of 4,500*l.* The endowment of the bishopric of St. Albans under this Act is to be deemed to be for all purposes subject to the same laws as the temporalities and endowment of any other bishopric in England. By section 14 it is provided that if the person who at the passing of this Act is the Bishop of Rochester is translated to the bishopric of St. Albans, he shall be entitled, so long as he continues Bishop of St. Albans, to a writ of summons to sit in Parliament, and to the same

rank and precedence in Parliament and elsewhere as if he had continued to be Bishop of Rochester; and he shall be entitled, so long as he continues Bishop of St. Albans, to reside at the episcopal residence of Danbury (until sold with his consent), and to receive out of the revenue of the bishopric of Rochester such annual sum as will, together with the revenue of the bishopric of St. Albans, make up his net annual income to the same amount as that which he received as Bishop of Rochester. Provision is also made by this section as to the retiring allowance of the Bishop of St. Albans under the Bishops' Resignation Act. Section 15 contains some miscellaneous provisions, and section 16 enacts that nothing in this Act shall authorise the Commissioners to apply any portion of their common fund towards the endowment of the bishopric of St. Albans, or of the dean and chapter of such bishopric save in so far as relates to the net annual sums of 500*l.*, by this Act made payable out of the endowment or income of the bishoprics of Winchester and Rochester respectively.

2. FINANCE AND TAXATION.

NATIONAL DEBT.

[38 and 39 Victoriæ cap. 45.—2nd August, 1875.]

An Act to amend the Law with respect to the Reduction of the National Debt and the Charge for the National Debt in the Consolidated Fund.

The principal provisions of this statute have reference to a new Sinking Fund and to the old Sinking Fund. Towards the new fund there is to be a permanent annual charge for the National Debt on the Consolidated Fund: during the financial year ending the 31st of March next 27,400,000*l.*; for the year 1877, 27,700,000*l.*; and for every subsequent year 28,000,000*l.* The annual charges payable out of the permanent charge are set forth, and any surplus is to be paid to the new Sinking Fund to reduce the debt. As the old Sinking Fund, annual accounts are to be published of the income and expenditure, and the surplus is to be paid in reduction of the debt. The National Debt Commissioners are to keep the accounts of the old and new Sinking Funds.

3. LAW AND JUSTICE.

INTERNATIONAL COPYRIGHT.

[38 and 39 Victoriæ, cap. 12.—13th May, 1875.]

An Act to amend the Law relating to International Copyright.

The preamble to this Act recites that by 15 Vict. cap. 12, which conferred certain privileges on dramatic authors, it was provided that nothing therein contained should be so construed as to prevent fair imitations or adaptations to the English stage of any dramatic piece or musical composition published in any foreign country. That proviso is now altered, and under this Act Her Majesty, by Order in Council, is empowered to direct that the sixth section of the recited Act shall not apply to dramatic pieces to which protection is so extended, and therefore the Act shall take effect with respect to such

dramatic pieces and to translations of them as if the sixth section was repealed.

QUALIFICATION OF JUSTICES OF THE PEACE.

[38 and 39 Victoriæ, cap. 54.—2nd August, 1875.]

An Act to amend the Qualification required by persons acting as Justices of the Peace.

The preamble recites that it is desirable to amend 13 George II, cap. 20, and the first section enacts that notwithstanding the said Act or anything therein contained, every person of full age who has during the two years immediately preceding his appointment been the occupier of a dwelling-house assessed to the inhabited house duty at the value of not less than 100*l.* within any county, riding, or division in England or Wales, and who shall during that time have been rated to all rates and taxes in respect of the said premises, and who is otherwise eligible, shall be deemed to be qualified to be appointed a justice of the peace for such county, riding, or division, provided always, that no justice appointed in respect of the qualification in this section mentioned shall continue so to act after he shall have ceased for twelve calendar months to possess the qualification just named.

LORD'S DAY OBSERVANCE.

[38 and 39 Victoriæ, cap. 80.—13th August, 1875.]

An Act to amend the Act of twenty-first year of the reign of King George the Third, chapter forty-nine, intituled "An Act for preventing certain abuses and profanations on the Lord's Day called Sunday," and for further amending the law concerning the remission of penalties.

This Act consists of a single section in which after reciting that doubts are entertained as to the power of the Crown to remit penalties and forfeitures incurred under 21 Geo. III, cap. 49, and that it is expedient to remove such doubts, it is enacted that it shall be lawful for Her Majesty to remit in whole or in part any penalty, fine, or forfeiture imposed or recovered for any offence under the said Act, whether on indictment, information, or summary conviction, or by action, or any other process. The Act is to be cited as the Remission of Penalties Act, 1875.

COUNTY COURTS.

[38 and 39 Victoriæ, cap. 50.—2nd August, 1875.]

An Act to amend the Acts relating to the County Courts.

This Act contains fourteen sections and two schedules. In any action in a County Court the plaintiff may at his option cause to be issued a summons, or, on filing an affidavit in the form given, a summons to be personally served; and if the defendant does not appear within sixteen days after notice and give notice in writing of his intention to defend, the plaintiff may, after sixteen days and within two months of the service, have judgment entered up for the amount of his claim and costs. Either of the parties to an action or any other proceeding may obtain of the Registrar of the Court summonses to

witnesses, and there are provisions as to summonses, and the Judge may do certain things within or without his circuit. Under this Act "assessors" may be appointed on the application of either party. An appeal may be made within eight days, without stating a special case. The Treasury may direct the remuneration to be given to officers under the Act. The Judges are to form new rules, to be submitted to the Lord Chancellor. The appointment of a high bailiff of a County Court as Registrar of a County Court shall vacate the office of high bailiff held by such appointee. No appeal from a decree of the High Court of Admiralty to be made on appeal from the County Court where such appeal affirms the judgment of the County Court, except by express permission of the Court of Admiralty. Where an Admiralty cause has been heard in the County Court with the assistance of nautical assessors, the Elder Brethren are to be summoned in the hearing of the appeal. There are directions on the demands to be made, with instructions as to the way in which the parties are to proceed.

PARLIAMENTARY ELECTIONS.

[38 and 39 Victoriæ, cap. 84.—13th August, 1875.]

An Act to regulate the Expenses and to control the Charges of Returning Officers at Parliamentary Elections.

This Act will continue in force until the end of the year 1880. It is to be construed as one with the Ballot Act, and to apply to England and Ireland. The charges to be allowed to returning officers at elections are set forth in the schedules, and the amount of security to be given. They are to be paid by the candidates in equal several shares, and where there is only one candidate, by such candidate. If a candidate is nominated without his consent, the persons by whom his nomination is subscribed are to be jointly and severally liable for the share of the charges for which he would be liable if nominated with his consent. The ballot-boxes used at municipal and school board elections may be hired at an expense of 5*s.* each, and only 7*l.* 7*s.* is to be paid for a polling station with two compartments. The candidates are to be furnished with the accounts within 21 days of the return of the writ, and the same may be "taxed" within 14 days. All claims against returning officers are to be made within 14 days after the elections. In the City of London the Mayor's Court is to tax the bill when required, and in England the County Court of the district. The first schedule contains the *maximum* charges to be made by Returning Officers:—For preparing and publishing the notice of elections, 2*l.* 2*s.*; for supplying the nomination papers, 1*l.* 1*s.*; and for travelling, 1*s.* per mile; for constructing a polling station, with its fittings, &c., in England, 7*l.* 7*s.*; for each ballot-box to be purchased, 1*l.* 1*s.*, and when hired 5*s.*; for stationery at each polling station, 10*s.*, and for ballot papers per thousand, 10*s.*; for a presiding officer, 3*l.* 1*s.*, and a guinea for each clerk. The other expenses in regard to county elections are specified in proportion to electors, and with regard to borough elections the expenses are after the same scale, with full particulars as to the charges to be made, which will in future elections considerably reduce the expenses of candidates in respect to Returning Officers in England and Ireland. According to the schedule the fee to a presiding officer in a county is 3*l.* 1*s.*, and in a borough. 3*l.* 3*s.*

WIDOWS AND CHILDREN OF INTESTATES.

[38 and 39 Victoriæ, cap. 27.—29th June, 1875.]

An Act to extend to the surviving Children of poor Widows the benefits of the Act thirty-six and thirty-seventh Victoria, chapter fifty-two, intituled "An Act for the Relief of Widows and Children of Intestates where the personal estate is of small value."

The preamble recites that it is desirable that the provisions of 36 and 37 Vict., cap. 52, intituled "An Act for the relief of Widows and Children of Intestates where the personal estate is of small value," should be made applicable to the surviving children of a poor widow who dies intestate; and the first section enacts that when the whole estate and effects of an intestate widow shall not exceed in value the sum of 100*l.*, any one or more of her children, if they shall reside at a distance exceeding three miles from the Registry of the Court of Probate having jurisdiction in the matter, may apply to the registrar of the county court within the district in which the intestate had her fixed place of abode at the time of her death, and on compliance with the regulations prescribed in the said Act of 36 and 37 Vict., shall be entitled to the benefits in that case made and provided by the said Act, and the schedule thereunto annexed.

THE SUPREME COURT OF JUDICATURE.

[38 and 39 Victoriæ, cap. 77.—11th August, 1875.]

An Act to amend and Extend the Supreme Court of Judicature Act, 1873.

This Act which consists of no fewer than 49 sheets is to be construed with the Act of 1873 and with the exception of the sections of the principal statute abolishing appeal to the House of Lords the date fixed for the commencement of its operation was the 1st of November, 1875, but sections 20, 21, and 55 of the Act of 1873 abolishing the appellate jurisdiction of the House of Lords are under section 2 not to come into force until 1st of November, 1876, up to which date an appeal may be brought from any judgment or order of the Court of Appeal in which it would have been allowed before the passing of this Act. Section 3 repeals section 5 of the principal Act which provided for the reduction of the number of judges. By section 4 the Court of Appeal is to be constituted of the following judges:—the five superior judges of the High Court (the Lord Chancellor, the Lord Chief Justice, and Master of the Rolls, the Lord Chief Justice of the Common Pleas, and the Lord Chief Baron), who are to retain their former titles, and are to sit in appeal *ex officio*. In addition the Queen may appoint as many ordinary judges, not exceeding five, as she may please; the first of such ordinary judges to be the two Chancery Lords Justices of Appeal, and one other person to be appointed by her Majesty by letters patent. To strengthen the court, the Lord Chancellor is empowered to make application to the President of any one of the divisions of the High Court other than the Chancery division; and in compliance with the request, he will secure the attendance in the Court of Appeal of an additional judge from such division; but the judges are not to be so summoned during the spring or summer circuits. Section 5 relates to the

tenure of office and the oaths of office of the judges, and enacts that no judge shall be capable of being elected to or sitting in the House of Commons, and that all the judges of the High Court and of the Court of Appeal shall hold their offices for life, subject to a power of removal by Her Majesty on an Address from both Houses of Parliament (a provision to which the Lord Chancellor is the only exception). By section 6 the President of the Court of Appeal is the Lord Chancellor, and the members other than those who sit *ex officio* are styled Lords Justices of Appeal. By section 7 the Lunacy Jurisdiction of the Lord Chancellor and of the Justices of Appeal in Chancery, which was left untouched by the Act of 1873, may now be intrusted by the Royal sign manual to any of the Judges of the High Court or of the Court of Appeal. Section 8 relates to the Admiralty Judges and Registrar, and provides that the Judge of the High Court of Admiralty shall share with others of the Bench the duty of going on Circuit, and of holding sittings for trials by jury in London and Middlesex. By section 9 the London Court of Bankruptcy is excepted altogether from the operation of the Acts, as was proposed in the Judicature Bill of last year. It was then intended that the office of Chief Judge should be filled by one of the Judges of the Exchequer Division, but the appointment is opened by the present Act to all Judges of the High Court. By section 10 the effect of the rule applying the Law of Bankruptcy to the administration of the assets of insolvent persons has been enlarged by extending it to the winding-up of companies under the Companies Acts. Section 11 enacts that cases assigned by any plaintiff or petitioner to any division of the High Court to which it ought not to be assigned may be transferred to the proper division for trial. Section 12 amends the direction of the original Act, which provided that not less than three Judges should always sit together for hearings in the Court of Appeal. It is now enacted that appeal motions, when the order or judgment sought is not of a final nature, may be heard before two Judges. Subject to these provisions, the Court of Appeal may sit in two divisions at the same time. Under section 13 some amendments are introduced into the section of the former Act (60), authorising the establishment of district registries, and provision is made for adapting existing enactments with regard to attorneys, together with the forms and certificates required under those enactments, to the forms of the new High Court. Distinctions between the various branches of the law itself having vanished, those which existed between the functions of proctors, attorneys, and solicitors, are removed by section 14, and the first two names are expressly abolished. Section 15 relates to the appeal from inferior court of record, sections 16 to 22 to the rules of court acts, and section 23 authorises the issue of Orders in Council for the entire or partial discontinuance of any Circuit, whether temporarily or permanently, and the formation of new circuits by the union of counties or parts of counties, or by making any county a circuit by itself. In particular, commissions are authorised for the discharge of the criminal and civil business of the county of Surrey by judges sitting in London, in which case Surrey will be deemed a circuit of itself. The places where Assizes are held may be changed, and all these and other powers are to be made in addition to and not in derogation of powers already vested in the Crown for these several purposes. There are other provisions to

carry out the new law, and the last section, number 35, provides that the present Chamber Clerks may be re-appointed on a vacancy at the same salary. The statute only extends to seven sheets, and the remaining 42 comprise the orders and forms. There are 63 rules and numerous forms set out to be used. All legal proceedings will in future be commenced by a writ of summons, which is to be endorsed with a statement of the claim made, or of the relief or remedy desired, and is to specify the division of the High Court to which it is intended that the action shall be assigned. All writs will, as heretofore, be issued in the Queen's name, and they will be tested in the name of the Lord Chancellor, or, during the avoidance of that office, of the Lord Chief Justice of England. Ample forms of endorsement are given in the Appendix under the various heads of the more usual of Chancery suits, of Probate and Admiralty causes, of money claims, costs, damages, &c. Where the plaintiff seeks to recover a debt or liquidated demand, or money payable by the defendant, the writ may be "specially endorsed" with the particulars of the claim. He may in this case file an affidavit swearing that in his belief there is no defence to the action, and call upon the defendant to show cause why judgment should not be signed. Unless the defendant can satisfy the Court that he has a good defence and obtain "leave to defend," the plaintiff will then be at liberty to sign judgment accordingly. The general rules to be followed in pleading are set out in order 19. The defendant upon his appearance will be at liberty to dispense with pleading altogether, but unless he states this to be his intention, the plaintiff will within six weeks after appearance entered deliver a statement of his claim and of the relief or remedy to which he considers himself entitled. Within eight days after the delivery of the claim the defendant will answer by his own statement of defence, set-off, or counter-claim, to which the plaintiff will, if necessary, return a reply, to be delivered within three weeks after the delivery of the last of the defences. Here the pleadings will terminate, nothing further being allowed except the joinder of issue, unless by leave of the Judge; and all subsequent pleadings which may be then allowed are to be delivered within four days after the delivery of the previous pleading. Issue will then be joined, and if the pleadings do not sufficiently define the issues, the Judge may direct and settle these himself. Pleadings are to state as concisely as possible the material facts on which the party relies, but not the evidence by what they are to be proved, and are to be nearly in the form hitherto usual in a bill in Chancery. The signature of counsel, however, will be no longer necessary. Provision is made for demurrer, default of pleading, and payment into court in satisfaction. Interrogatories may be exhibited, in the form hitherto usual in Chancery suits, which are to be answered by affidavit. In cases where a question of law is in doubt or dispute, such questions may be stated by the parties concurrently in the form of a special case. Ample forms are given in the Appendix for pleadings in 24 different sorts of actions, including Common Law, Chancery, Probate, and Admiralty matters, in the majority of which the claim, defence, reply, and joinder of issue are set out at length, forming a most valuable body of precedents for practical use. Order 36, divided into 34 sections, regulates the trial of the action. Local venues are abolished, but when the plaintiff purposes a trial elsewhere than in Middlesex, he may name in his

claim the county or place where he proposes that the action shall be tried. Order 37 is for the regulation of evidence, which is ordinarily to be given *viva voce*, but it may, by permission of the judge, be given by affidavit. Evidence upon motions and petitions is to be given by affidavit in the ordinary way. The costs of affidavits which set forth matters of hearsay, augmentative matter, or copies of or extracts from documents are liable to be charged upon the parties who file them. The judgment of the court will usually be obtained by motion for judgment. The Appendix is terminated by several forms of judgment, and of the præcipes and writs of execution by which judgments are carried into effect. Although terms are abolished, the "long vacation" is preserved, and is to commence as usual on the 10th of August and terminate on the 24th of October. There is to be a vacation of a week at Easter, Whitsuntide, and Christmas. Two of the judges, however, are to sit in the vacation for the hearing in London and Middlesex of such applications as may require to be immediately or promptly heard, and they may sit either together or separately as a divisional court. The vacation judges of the High Court may dispose of all actions, matters, and other business of an urgent nature during any interval between the sittings of any division of the High Court to which such business may be assigned, although such interval may not be called or known as a vacation.

PEACE PRESERVATION (IRELAND).

[38 and 39 Victoriæ, cap. 14.—28th May, 1875.]

An Act to amend and continue certain Acts for the preservation of the Peace in Ireland, and to grant an Indemnity in certain cases.

After the first section, giving the short title of the Act, the second section repeals the section of the Act of 1870 when applied to "proclaimed districts," the extraordinary powers contained in the 15th and 16th George III, cap. 21, and in the amending Act of the 1st and 2nd William IV, cap. 44. The summary proceedings in certain cases authorised by the 26th section of the Act of 1870 are modified by a clause in the third section of the present Act. The punishment authorised to be inflicted upon such summary proceedings is reduced by the present Act from six to three calendar months, and the matter is not to be summarily determined except with the consent of the person charged. Under the former Act, the exercise of the summary jurisdiction was left to the discretion of the justices. The twenty-ninth section, enabling the Attorney-General to change at his discretion the venue of indictments found in any county specially proclaimed, is also repealed. Sections 30 to 34 of the Act of 1870, repealed by the present Act, contained stringent provisions for the suppression of newspapers containing seditious or treasonable matter. The Lord Lieutenant was empowered, in the case of any newspaper printed or published in Ireland, which, in his opinion, should contain any treasonable or seditious engraving, matter, or expressions, or any incitements to the commission of any felony, to issue a notice in a prescribed form to the printer or proprietor of such newspaper. If after the expiration of seven days, in the case of a paper published at intervals of a week or longer, and after the expiration of two days in the case of papers published at a less interval, any treasonable or

seditious matter were published in such paper, or in any other paper issued by the same printer or publisher, or owned by the same proprietor, the whole plant and materials used or employed for the purpose of printing or publishing such newspaper, and all copies of the paper, wherever found in Ireland, were to be forfeited to Her Majesty. The Lord Lieutenant was empowered to issue warrants to search for and seize, by force if necessary, such newspapers, with the printing presses, types, and other materials used in their production. The most important of the concessions made by the present Act are effected by the repeal of Sections 18 to 37 of the Act of 1870. Sections 18 to 22, both inclusive, refer to the revocation of licences under special proclamations issued by the Lord Lieutenant. By these special proclamations the Lord Lieutenant, previously to the passing of the present Act, was authorised at any time to issue a notice in the *Dublin Gazette* revoking all licences to carry arms granted under the Peace Preservation Act. Every person to whom a licence had been granted might be required to deposit at the nearest police station or barrack within a given time the arms which he had obtained licence to carry. Every person neglecting to obey this general notice was liable to the penalties originally incurred by persons having or carrying arms without licence. The twenty-third section of the Act of 1870, repealed by the present Act, relates to the power to arrest persons in a district specially proclaimed found out at night in suspicious circumstances. Any person found in the fields, streets, or highways, or elsewhere out of his dwelling or place of abode, at any time from one hour after sunset until sunrise, might be arrested by "any constable, peace officer, or other person," and brought before the magistrates. In case the magistrates should have reason to conclude that such person was not out of his house upon some lawful occasion or business, he might be imprisoned, with or without hard labour, for any period not exceeding six calendar months. The 24th section of the Act of 1870 authorised the Lord Lieutenant to issue an order directing that any house or place for the sale by retail of intoxicating liquors, situated in a specially proclaimed district should be closed at sunset, or at any specified hour after sunset. Any person violating such order was liable to a penalty not exceeding 50*l*., and to imprisonment for a term not exceeding three calendar months. The twenty-fifth section conferred powers to arrest strangers in the district specially proclaimed. Any "constable, police officer, or other person," might arrest and bring before the magistrate any stranger sojourning or wandering in any district specially proclaimed. The magistrate was to examine him as to his character, and his motive for being or remaining in the place where he was found. Unless his answers should be satisfactory, the magistrate was to commit him to gaol until he should find security, or be discharged by further order. The last group of the provisions of 1870, repealed by the present Act, relates to the sale of gunpowder and firearms. No person was allowed to sell powder not being a licensed manufacturer thereof, unless he should have procured a licence for that purpose, to be granted upon a certificate of two justices. Offences against this law were punishable by a fine of 50*l*. and forfeiture of all powder found on the premises. Makers of and dealers in gunpowder were required, under heavy penalties, to make a monthly return of their stock, and to keep accounts of their sales. Similar accounts were ordered to be kept of

all sales made by persons dealing in firearms. Subject to these extensive and important reductions, the Act of 1870 is continued in operation for a further period of five years, the present Act expiring on the 1st of June, 1880. The final section of the present Act limits the operation of the Westmeath Act of 1871 to a term of two more years, so as to expire on the 1st of June, 1877.

FRIENDLY SOCIETIES.

[38 and 39 Victoriæ, cap. 60.—11th August, 1875.]

An Act to consolidate and amend the Law relating to Friendly and other Societies.

The whole of this Act, which is to be cited as "The Friendly Societies Act, 1875," is in force from the 1st of January, 1876, some of its provisions having taken effect on its passing. Section 4 gives a long series of definitions. Under Section 8, the classes of societies which may be registered under this Act are declared to be:—(1.) Societies (in the Act called friendly societies) established to provide by voluntary subscriptions of the members thereof, with or without the aid of donations—For the relief or maintenance of the members, their husbands, wives, children, fathers, mothers, brothers or sisters, nephews or nieces, or wards being orphans, during sickness or other infirmity, whether bodily or mental, in old age (which shall mean any age after fifty) or in widowhood, or for the relief or maintenance of the orphan children of members during minority. For insuring money to be paid on the birth of a member's child, or on the death of a member, or for the funeral expenses of the husband, wife, or child of a member, or of the widow of a deceased member, or as respects persons of the Jewish persuasion, for the payment of a sum of money during the period of confined mourning. For the relief or maintenance of the members when on travel in search of employment, or when in distressed circumstances, or in case of shipwreck, or loss or damage of or to boats or nets. For the endowment of members or nominees of members at any age. For the insurance against fire, to any amount not exceeding 15*l.* of the tools or implements of the trade or calling of the members. Provided that no society (except as aforesaid) which contracts with any person for the assurance of an annuity exceeding 50*l.* per annum, or of a gross sum exceeding 200*l.*, shall be registered under this Act. (2) *Cattle Insurance Societies.*—Societies (herein called cattle insurance societies) for the insurance to any amount against loss by death of neat cattle, sheep, lambs, swine, and horses, from disease or otherwise. (3) *Benevolent Societies.*—Societies for any benevolent or charitable purpose (herein called benevolent societies). (4) *Working Men's Clubs.*—Societies (herein called working men's clubs) for purposes of social intercourse, mutual helpfulness, mental and moral improvement. and rational recreation. (5) *Specially authorised Societies.*—Societies for any purpose which the Treasury may authorise as a purpose to which the powers and facilities of this Act ought to be extended (herein called "specially authorised societies"). Section 10 contains a long series of regulations as to the functions of the registrar of the societies. Section 11 relates to the registration of societies, and notifies that no society can be registered which does not contain seven members at least. No society is to be registered

under a name identical with that under which any other existing society is registered, or so nearly resembling such name as to be likely, or in any way likely, in the opinion of the registrar, to deceive the members or the public as to its identity, and no society shall change its name without the sanction of the chief or an assistant registrar, as afterwards provided. A society (other than a benevolent society or working men's club) shall not be disentitled to registry by reason of any rule for or practice of dividing any part of the funds thereof, if the rules thereof contain distinct provision for meeting all claims upon the society existing at the time of division before any such division takes place. No society assuring to any member a certain annuity shall be entitled to registry, unless the tables of contributions for such assurance are certified by the actuary to the Commissioners of the National Debt. Provisions are also made in this section for the acknowledgment of registry and for appeals or refusal to register. Section 13 requires copies of rules and notice of alterations of rules to be delivered to the registrar, and no amendment of rules is to be valid until registered. A copy of the rules of a registered society is to be delivered by the society to every person on demand, on payment of a sum not exceeding one shilling; and if any person, with intent to mislead or defraud, gives to any other person a copy of any rules, laws, regulations, or other documents, other than the rules for the time being registered under this Act, on the pretence that the same are existing rules of a registered society, or that there are no other rules of such society, or gives to any person a copy of any rules on the pretence that such rules are the rules of a registered society when the society is not registered, the person so offending shall be deemed guilty of a misdemeanour. Section 14 refers to the duties of societies to have a registered office, to appoint trustees, to have an annual audit, to make annual returns to the registrar of receipts and expenditure, funds and effects, and quinquennial returns of sickness and death. The assets and liabilities are to be valued every five years. Section 15 refers to the privileges of registered societies, such as exemption from stamp duties, payment of sums to deceased members, &c. Section 16 relates to the property and funds of societies. Section 17 to the investment of the funds of societies with the National Debt Commissioners. Section 18 to loans to members. Section 19 to the accumulation of surplus contributions for the use of members. Sections 20 and 21 relate to the duties of accountant officers, and to legal proceedings. Section 22 relates to the settlement of disputes among members. Section 23 empowers registrars, upon the application of one-fifth of the whole number of members of a registered society, or of 100 members of a society numbering from 1,000 to 10,000, or of 500 members of a society of upwards of 10,000, to order an inspection of accounts and books. Section 27 enacts that no member of a registered friendly society, nor any person claiming through a member, shall be entitled to receive more than 200*l.* by way of gross sum, together with any bonuses or additions declared upon assurances not exceeding that amount, or (except as provided by Section 6 of this Act) 50*l.* a-year by way of annuity, from any one or more of such societies; and any such society may require a member, or person claiming through a member, to make and sign a statutory declaration that the total amount to which such member or person is entitled from one or more such societies does not exceed the sums aforesaid; and any person know-

ingly making a false or fraudulent declaration in the matter shall be guilty of a misdemeanour. Section 28 relates to the payments on death of children. And the remaining sections refer to the management of societies with branches, and the dissolution of societies. There are four schedules supplying the documents for use by the societies.

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4. TRADE AND COMMERCE.

EMPLOYERS AND WORKMEN.

[38 & 39 Victoriæ, cap. 90.—13th August, 1875.]

An Act to enlarge the Powers of County Courts in respect of disputes between Employers and Workmen, and to give other Courts a limited Civil Jurisdiction in respect of such disputes.

This Act contains 15 sections, the 1st and 2nd of which are preliminary, and appoint only the short title and time of commencement. The 3rd section gives power to every County Court, in disputes between employers and workmen, in addition to the jurisdiction which it already possessed (1), to adjust and set off, the one against the other, all such claims on the part either of the employer or the workman, arising out of or incidental to the relation between them, as the court may find to be subsisting, whether such claims are liquidated or unliquidated, and are for wages, damages, or otherwise; (2) to rescind any contract between the employer and the workman, upon such terms as to the apportionment of wages or other sums due thereunder, and as to the payment of wages or damages, or other sums due, as it think just; (3) to accept security (satisfactory to the court) from the defendant, with the consent of the plaintiff, for the performance of the unperformed part of a contract, for the breach of which the court might award damages, and order performance of the contract accordingly, in place either of the whole of the damages which would otherwise have been awarded, or some part of such damages.

Such last-mentioned security to be an undertaking by the defendant, and a surety or sureties for performance of the contract, and for payment of a sum of money in the event of non-performance; and any money paid by a surety in respect thereof, with all costs, is to be deemed a debt due to him from the defendant, and if given under the direction of a court of summary jurisdiction (afterwards defined) is to be recoverable in such court. Under section 4, a dispute between an employer and a workman, if the amount claimed do not exceed 10*l*., may be determined by a court of summary jurisdiction, which is, by the tenth section, stated to be, (1) in the City of London, the Lord Mayor, or any alderman of the said city, sitting at the Mansion House or Guildhall; (2) in any police court division in the Metropolitan Police district, any Metropolitan Police magistrate for that division; (3) any city, town, liberty, borough, place, or district for which a stipendiary magistrate is for the time being acting, such stipendiary magistrate; and (4) elsewhere any justice or justices of the peace to whom jurisdiction is given by the Summary Jurisdiction Act (11 and 12 Vict., c. 43); but every complaint under this part of the section must be determined, and an order for imprisonment made by two or more justices sitting in petty sessions.

The court is to be deemed a court of civil jurisdiction, and in a proceeding in relation to any dispute under the Act it may order payment of any sum found to be due as wages or damages, or otherwise, and may exercise the powers by the third section conferred on a County Court. The court of summary jurisdiction is, by sections 5 and 6, to determine disputes between masters and apprentices, for which purpose the disputants are to be placed in the relative positions of employer and workman, and the instrument of apprenticeship is to be regarded as a contract between such persons. In these cases the court may, in addition to its other powers, order the apprentice to perform his duties; and, if it rescinds the instrument of apprenticeship, it may order the whole or any part of the premium to be repaid. The apprentice is liable to imprisonment for not exceeding fourteen days, if he fail for not less than one month after the making of an order directing him to perform his duties to comply with such order. Section 7 empowers the court to summon any person liable under the instrument of apprenticeship, for the good conduct of the apprentice, and, in addition to or in substitution for any order against the apprentice, to order such person to pay damages for any breach of contract to an amount not exceeding the limit, if any, to which he is liable under the instrument of apprenticeship. The court may also accept security for the performance by the apprentice of his contract, instead or in mitigation of any punishment to which he would otherwise be subject.

Section 8, with which the second part of the Act relating to procedure begins, regulates the mode of giving security by either an oral or a written acknowledgment, and authorises the Lord Chancellor to make rules thereupon. The 9th section declares that any matter in respect of which a court of summary jurisdiction has authority under the Act, shall be deemed to be a matter on which an order on complaint may be made under the 11th & 12th Vict., c. 43, but shall not be considered to be a criminal proceeding; all powers given to justices by the Act shall be in addition to the powers which they previously possessed, but no warrant of apprehension shall issue for default in appearance to answer to a complaint, unless the defendant be an apprentice; no order made by a court of summary jurisdiction for the payment of money shall be enforced by imprisonment, except in accordance with the provisions of the 5th section of the Debtors Act, 1869, and therefore every such sum of money, which, moreover, may be payable by instalments, shall be taken to be a debt due from the defendant under a judgment of a competent court within the meaning of the same 5th section; and no goods shall be taken under a warrant of distress which might not be seized by virtue of a County Court execution. The Lord Chancellor may make, rescind, alter, and add to, rules for carrying into effect the jurisdiction given to a court of summary jurisdiction, and in particular as to costs, with power to provide that they shall not exceed costs in a similar case in the County Court, and any such rules, so far as they relate to proceedings under the 5th section of the Debtors Act, 1869, shall be deemed to be prescribed rules within the meaning of that section.

The third part of the Act contains definitions; but, in addition to these, it is by the 10th section declared that "the expression 'workman' does not include a domestic or menial servant, but . . . means any person who, being a labourer, servant in husbandry, journeyman,

artificer, handicraftsman, miner, or otherwise engaged in manual labour, whether under the age of twenty-one or above that age, has entered into or works under a contract with an employer, whether the contract be made before or after the passing of this Act, be expressed or implied, oral or in writing, and be a contract of service or a contract personally to execute any work or labour." The 11th section enacts that no forfeiture for absence shall be deducted from or set-off against a claim for wages or other sum due for work done before such absence by a child, young person, or woman subject to the Factory Acts, except to the amount of any damage which the employer may have sustained by reason of such absence. The application of the Act is by the 12th section restricted, so far as regards apprentices, to those in the business of a workman, as before defined, who either paid no premium, or whose premium did not exceed 25*l.*, and to apprentices bound under the Poor Law Acts. The 13th section, being the saving clause, declares that no local or special jurisdiction touching apprentices shall be taken away or abridged, and that the Act shall not apply to seamen, or to apprentices to the sea service. By the 14th section the Act is extended to Scotland, and by the 15th to Ireland.

The new rules and forms for carrying into effect the jurisdiction given to courts of summary jurisdiction in England by this Act have been issued, and the statute is now in force, and acted upon at the Metropolitan Police Courts. The Master and Servant Act is now changed into the Employers and Workmen Act. The rules are signed by the Lord Chancellor. The mode of procedure is simplified by the rules. The particulars are to be annexed to the summons, and a fee of only 1*s.* is to be charged for the entry of a plaint, including the summons thereon. No notice is required to be given by a defendant of any set-off or counter-claim. The summons is not to be served on a defendant less than one "clear day" before the hearing. Costs incurred in the employment of a solicitor may be allowed, not exceeding 10*s.* where the sum exceeds 40*s.*, and not exceeding 15*s.* where it exceeds 5*l.* There are twenty-one rules and eighteen forms, with a schedule of fees in the document.

EXPLOSIVE SUBSTANCES.

[38 and 39 Victoriæ, cap. 17—14th June, 1875.]

An Act to amend the Law with respect to manufacturing, keeping, selling, carrying, and importing Gunpowder, Nitro-glycerine, and other explosive substances.

This Act consists of four parts with 122 sections. The first part contains the general law relating to gunpowder, which is by section 4 only to be manufactured at a factory lawfully existing or licensed under this Act; and by section 5 (except for private use) is only to be kept in existing or new magazines or stores, or in registered premises. Sections 6 to 8 relate to the licensing of factories and magazines; and 9 to 11 to the regulation of such factories and magazines, with the rules for workmen. Sections 15 to 20 relate to the licensing and regulation of stores, and 20 and 21 to the retail dealing with gunpowder. Sections 23 to 29 supply miscellaneous provisions; 30 to 32 relate to the sale of gunpowder, and 33 to 38 to its conveyance.

Part II applies the laws in Part I to other explosives, with certain exceptions and modifications. Part III provides for the administration of the law by Government Inspectors, and sections 67 to 76 confer power on local authorities to enforce the Act, and to search for explosive substances when necessary. Part IV supplies supplemental provisions and definitions.

ADULTERATION OF FOOD AND DRUGS.

[38 and 39 Victoriæ, cap. 63—11th August, 1875.]

An Act to repeal the Adulteration of Food Acts, and to make better provision for the Sale of Food and Drugs in a pure state.

After a series of definitions in section 2, section 3 enacts that no person shall mix, colour, stain, or powder, or order or permit any other person to mix, colour, stain, or powder, any article of food with any ingredient or material so as to render the article injurious to health, with intent that the same may be sold in that state, and no person shall sell any such article so mixed, coloured, stained, or powdered, under a penalty in each case not exceeding 50*l.* for the first offence; every offence, after a conviction for a first offence, shall be a misdemeanor, for which the person, on conviction, shall be imprisoned for a period not exceeding six months with hard labour. Section 4 applies a similar penalty to the adulteration of drugs. Section 5 exempts from penalties any person if he shows to the satisfaction of the justice or court before whom he is charged that he did not know of the article of food or drug sold by him being so mixed, coloured, stained or powdered as in either of those sections mentioned, and that he could not with reasonable diligence have obtained that knowledge. Section 6 enacts that no person shall sell to the prejudice of the purchaser any article of food or any drug which is not of the nature, substance, and quality of the article demanded by such purchaser, under a penalty not exceeding twenty pounds; providing that an offence shall not be deemed to be committed under this section in the following cases; that is to say:—(1) Where any matter or ingredient not injurious to health has been added to the food or drug because the same is required for the production or preparation thereof as an article of commerce, in a state fit for carriage or consumption, and not fraudulently to increase the bulk, weight, or measure of the food or drug, or conceal the inferior quality thereof; (2) Where the drug or food is a proprietary medicine, or is the subject of a patent in force, and is supplied in the state required by the specification of the patent; (3) Where the food or drug is compounded as in this Act mentioned; (4) Where the food or drug is unavoidably mixed with some extraneous matter in the process of collection or preparation. Section 7 contains a provision for the sale of compounded articles of food and compounded drugs, in accordance with the demand of the purchaser. The remaining sections provide for the appointment of analysts, and other means of carrying out the Act.

TRADE MARKS.

[38 and 39 Victoriæ, cap. 91—13th April. 1875.]

An Act to Establish a Register of Trade Marks.

Section 1 provides that a register of trade marks, as defined by this

Act, and of the proprietors thereof shall be established under the superintendence of the Commissioners of Patents, and from and after the 1st of July, 1876, a person shall not be entitled to institute any proceeding to prevent the infringement of any trade mark as defined by this Act until and unless such trade mark is registered in pursuance of this Act. Under section 2, a trade mark must be registered as belonging to particular goods, or classes of goods; and when registered shall be assigned and transmitted only in connection with the goodwill of the business concerned in such particular goods or classes of goods, and shall be determinable with such goodwill, but subject as aforesaid registration of a trade mark shall be deemed to be equivalent to public use of such mark. By section 3, the registration of a person as first proprietor of a trade mark shall be *primâ facie* evidence of his right to the exclusive use of such trade mark, and shall, after the expiration of five years from the date of such registration, be conclusive evidence of his right to the exclusive use of such trade mark, subject to the provisions of this Act as to its connection with the goodwill of a business. By section 4, it is enacted that every proprietor registered in respect to a trade mark subsequently to the first registered proprietor shall, as respects his title to that trade mark, stand in the same position as if his title were a continuation of the title of the first registered proprietor. The remaining sections provide for the carrying out of the Act, and section 9 contains special provisions as regards the Cutlers' Company and Sheffield Corporate marks.

MERCHANT SHIPPING.

[38 & 39 Victoriæ, cap. 88.—13th August, 1875.]

An Act to make provision for giving further Powers to the Board of Trade for stopping Unseaworthy Ships.

Section 1 gives power to appoint a sufficient number of paid officers, having personal authority to detain unseaworthy ships, and the orders made by them will have the same authority as orders made under the Act of 1873 by the Board of Trade. Section 2 facilitates the action of seamen who may have reason to think the vessel to which they belong in an unseaworthy state. One-fourth of their number may complain to this effect, either directly to the Board of Trade or to some officer appointed under the first clause, in which case steps will be at once taken to ascertain whether the ship ought to be detained, without any security for consequent costs and expenses being required from the complainants. Clause 3 enacts that, after the 1st of October, 1875, no cargo of which more than one-third consists of any kind of grain, corn, rice, paddy, pulse, seeds, nuts, or nut-kernels is to be carried on board a British ship unless contained in bags, sacks, or barrels, or secured from shifting by boards, bulkheads, or otherwise. By section 4, every person who sends a ship to sea in an unseaworthy condition, the managing owner of any ship so sent to sea, every person who attempts the same, or is party to such an attempt, and every master of such ship who knowingly takes the same to sea, is made alike liable to the penalties of the misdemeanour. The owner of every ship is to register the name of her managing owner or of the person to whom the management of the vessel is intrusted on behalf of the owner, under a penalty of 500*l*. Clause 5 relates to deck-lines. After the 1st of November, 1875, a line is to be painted amidship, on

every British ship, a foot in length, indicating the position of each deck. Coasting and fishing vessels and pleasure yachts are exempted from the clause. Clause 6 refers to the question of load-lines. Every ship, before she is entered outwards, is to be marked with a disc, a foot in diameter, a line drawn through the centre of which shall indicate the *maximum* load-line in salt water to which the owner intends to load the vessel for that voyage. The owner is to deliver to the Customs officer a statement, in writing, of the difference in feet between the centre of this disc and the upper edge of each of the lines indicating the position of the decks, and this statement is to be repeated in each seaman's contract and in the log-book. No alteration in these marks is to be made until her next return to a port of discharge in the United Kingdom. The penalty for neglecting this provision, or for defacing the lines, is 100*l*. It is also provided that the shipowner is to be personally liable to the master, seamen, and apprentices of the vessel for neglect of proper measures to insure the seaworthiness of the vessel at the commencement of and during the voyage. The period of the operation of the Act is limited to the 1st of October, 1876.

5. LOCAL GOVERNMENT.

PUBLIC HEALTH.

[38 and 39 Victoriæ, cap. 55.—11th August, 1875.]

An Act for consolidating and amending the Acts relating to Public Health in England.

The operation of this important statute is limited to England. Under its introductory provisions, sanitary districts are divided into urban and rural, the former being limited by the sanitary jurisdiction of corporations, improvement commissioners, and local boards; the latter by that of boards of guardians. Every place has thus its own sanitary authority and no more, and no two sanitary authorities can overlap each other. Part 3, representing the main bulk of the Act, and occupying 131 clauses, consists of what are specially denominated sanitary provisions. It is divided into the heads of:—1, Sewerage and drainage; 2, privies, water-closets, &c.; 3, scavenging and cleansing; 4, water supply; 5, regulation of cellar dwellings and lodging-houses; 6, nuisances: 7, offensive trades; 8, unsound meat, &c.; 9, infectious diseases and hospitals; 10, prevention of epidemic diseases; 11, mortuaries. Each head includes the corresponding statutory regulations, together with the penalties by which they are severally to be enforced. Part 4 is specially entitled "Local Government Provisions," and contains, under several heads, the law upon such matters of local government as are only indirectly connected with the question of public health. Under this title are:—1, Regulations with regard to highways and streets, including the power for widening, improving, paving, and lighting them; 2, public pleasure-grounds, under which head stands somewhat oddly the power to provide urban districts with public clocks; 3, markets and slaughter-houses; 4, police regulations, incorporating for the purposes of the present Act several provisions of the Towns Police Clauses Act. Part 5 is headed "General Provisions," and relates to the general powers and methods of which local authorities

may avail themselves. It defines their power to enter into contracts, to purchase lands, to have recourse to arbitration, to make and alter bye-laws, to appoint officers, including the medical officer of health, and it regulates the mode of conducting their business. Part 6 relates to powers of rating and borrowing, containing, under the head of "Urban Rates," full provisions for the assessment of general district rates, private improvement rates, and highway rates. The expenses of rural authorities under this Act are dealt with by a division into general and special heads, the former being payable out of a common fund, and the latter being a special charge upon each contributory place. Both are chargeable, by way of precept, upon the poor rates. Borrowing powers are defined and regulated, and due provision is made for audits. Part 7 is headed "Legal Proceedings," relating chiefly to the prosecution of offences, the recovery and application of penalties, and the service of notices. An appeal lies, in certain circumstances, to the local Government Board, and a general appeal in matters of rating belongs to the jurisdiction of the Quarter Sessions. Part 8 is entitled "Alteration of Areas and Union of District," and sets out the powers of the Local Government Board in that behalf exercised by Provisional Orders and otherwise, including the power to invest rural authorities with all or some part of the powers given by the Act to urban authorities. Any urban or rural districts may, under this part of the Act, be united either for the purpose of procuring a common supply of water, or of making a main sewer, or carrying into effect a common system of sewerage, or for any other of the purposes of the Act. Joint boards may be constituted having a corporate nature. Districts may be united for the special purpose of appointing a more competent officer of health. Port sanitary authorities are constituted under this head, and their jurisdiction and powers are defined. Part 9 is headed with the name of the Local Government Board. Together with general powers to hold inquiries and make orders, it regulates the practice of Provisional Orders and of the Acts which confirm them. It sets forth the powers possessed by the Board upon default of the local authorities, and the provisions for the recovery of expenses consequent upon such default, and the power of the Local Government Board to alter and repeal local Acts, and to settle differences consequent upon the transfer of powers and duties of the various local authorities. Part 10 is headed "Miscellaneous and Temporary Provisions," and consists of a collection of provisions not included under the previous heads. Various saving clauses relating to navigation and water rights, and to certain exemptions of a local nature, bring the Act to a close. The schedules contain, among other things, full rules for the election of local boards.

MUNICIPAL ELECTIONS.

[38 and 39 Victoriæ, cap. 40.—19th July, 1875.]

An Act to amend the Law relating to Municipal Elections.

This statute entirely alters the system of the nomination of candidates for municipal elections. In the first place, the nomination paper, which previously was required to be signed by one burgess, must now be signed by two as nominators, and by eight other burgesses as assentors. Such nomination paper must be delivered to

the Town Clerk seven days at least before the date of election, exclusive of Sundays, and before five o'clock in the afternoon. The Town Clerk is required to forthwith send the notice of such nominations to the persons nominated. The mayor will attend at the Guildhall on the day next after the last allowed for the delivery of nomination papers, between the hours of two and four in the afternoon, and will decide on the validity of any objection made to a nomination paper, but any objection to be considered must be in writing. The candidate nominated by each nomination paper, and one other person appointed by him, are entitled to attend these proceedings, but no other person shall attend, except for the purpose of assisting the mayor. The mayor must give his decision in writing; if it disallows an objection, it shall be final; if it allows an objection, it shall be subject to reversal on a petition questioning the election. Where more candidates are nominated than there are vacancies to be filled, any candidate may withdraw by giving notice to the Town Clerk not later than two o'clock on the day next after the last day for the delivery of the nomination papers. Such notices will take effect in the order in which they are delivered, but no such notice shall have effect so as to reduce the number of candidates to below the number of vacancies. Four days before the day of election the Town Clerk must publish a list of all persons duly nominated, and the burgess-roll is made conclusive as to the right of any person to vote.

ARTISANS' DWELLINGS.

[38 and 39 Victoriæ, cap. 36—29th June, 1875.]

An Act for facilitating the Improvement of the Dwellings of the Working Classes in Large Towns.

The preamble recites that various portions of many cities and boroughs are so built, and the buildings thereon are so densely inhabited, as to be highly injurious to the moral and physical welfare of the inhabitants, and that, as individual owners may be unable to remedy the evil, it is necessary that such houses, courts, and alleys should be pulled down, and those portions of the town reconstructed. Section 1 gives the short title of the statute as "The Artisans' and Labourers' Dwellings Improvement Act, 1875." Section 2 applies the Act to certain districts, and appoints the Local Authority for those districts. The Local Authority in the City of London is the Commission of Sewers; in the rest of the metropolis, the Board of Works; and throughout the rest of the country the sanitary authority of each urban sanitary district. Section 3 empowers a local authority, on being satisfied by official representation of the unhealthiness of a district, to make a scheme for its improvement. By section 4, the first step in any proceeding under the Act belongs to the Medical Officer of any district board or vestry, or, in the metropolis, to a special Medical Officer or Officers, the appointment of whom is authorised by this Act for the exclusive purpose of carrying it into effect. The Medical Officer, whenever he sees cause, may make an official representation to the local authority, stating that the houses, courts, and alleys within a certain area are unfit for human habitation, or that the population within a certain area is stricken with disease, which is attributable to the closeness and bad arrangement of the houses within it, or to the want of light, air, and proper conveniences. He

will, if necessary, state that these evils cannot be remedied except by an improvement scheme. The local authority is to consider these statements, and, if they are found to be well grounded, is to pass an affirmatory resolution and proceed to prepare an improvement scheme. If either two Justices of the Peace or twelve ratepayers of the district complain to the Medical Officer that a certain area is an unhealthy area, it is his duty forthwith to inspect it and make an official representation stating whether, in his opinion, the area in question is unhealthy or not unhealthy for the purposes of the Act. If, after the twelve ratepayers have made such complaint, the Medical Officer should neglect to inspect it and make his official representation, or if in his opinion the area should be not an unhealthy one, they may appeal to the confirming authority. By section 5 an improvement scheme is to be accompanied by plans and estimates. It may exclude any portion of the area which is the subject of the official representation, and it may include any neighbouring property materially affected by it. It is to provide for the accommodation of at least as many persons of the working class as are displaced, in suitable dwellings, within the same area, or in the vicinity. Having given the proper notices, the local authority will, under section 6, petition the confirming authority for a confirmatory order. The confirming authority, on receipt of the petition, will direct a local inquiry. Should the inquiry be satisfactory, they will make a provisional order declaring the limits of the area, and authorising the scheme to be carried into execution. Those who oppose the scheme may, however, petition the House that the Bill confirming the provisional order may be referred in the usual way to a Committee, in which case the petitioners are, under section 7, liable, upon failure, to be personally mulcted in costs. By section 9 the local authority, upon the confirmation of the provisional order, will put the scheme into execution by selling or letting the area upon building or other leases, with appropriate stipulations, covenants, and provisoes. They may enter into engagements of this character with societies or trustees, but are not, except in special cases, and with the consent of the confirming authority, to execute the works themselves. They may pull down old buildings and lay out, pave, sewer, and complete the new streets. If within five years the local authority has failed to sell or let all the lands comprised in the scheme, the confirming authority may, under section 10, themselves sell such lands by auction, subject, of course, to the condition to erect on them dwellings for the working classes. Section 11 provides for the issue of notices not less than 13 weeks before the destruction of any property is commenced. Part II of the Act supplies provisions as to the execution of the improvement scheme. By section 19, relating to the acquisition of land, it is enacted that the price of the lands, and the compensation payable in respect of any interest in the lands, are to be assessed upon the general principle of fair market value. It is usual, when lands are compulsorily purchased for purposes of enterprise, to allow a bonus of 10 or 20 per cent. for the forced sale, but it is enacted that in the present case no such bonus shall be allowed. Sections 21 to 23 relate to the provision of the funds for expenses by local rates. Part III, consisting of sections 24 to 31, contains miscellaneous provisions and definitions, and the schedule supplies provisions with respect to "the purchase and taking of lands in England otherwise than by agreement."

ABSTRACTS OF PARLIAMENTARY AND OTHER OFFICIAL DOCUMENTS.

1. FINANCE, TAXATION, AND CURRENCY.

NATIONAL REVENUE AND EXPENDITURE.—The subjoined Tables show the GROSS PUBLIC REVENUE AND EXPENDITURE of the United Kingdom in the Financial Year ended the 31st March, 1875:—

SOURCES OF REVENUE:—	£
Customs	19,289,000
Excise	27,395,000
Stamps	10,540,000
Land Tax and House Duty	2,440,000
Property and Income Tax	4,306,000
Post Office	5,670,000
Telegraph Service	1,120,000
Crown Lands (Net)	385,000
Miscellaneous, viz.:—	
Military and Naval Extra Receipts, and Proceeds of Old Stores sold	797,385
Amount received from the Revenues of India on account of the Effective and Non-effective Charges of British Troops serving in that Country	523,500
Interest on Public Loans	466,986
Allowance out of Profits of Issue received from the Bank of England, per Act 24 Vict. c. 3	138,578
Treasury Chest: diminution of Balance, under 36 & 37 Vict. c. 56	300,000
Other Miscellaneous Receipts	1,550,422
Total Income	£74,921,872
Excess of Total Expenditure over Income	6,166
	£74,928,039
Income for year estimated in Budget	£74,425,000
Actual income at the Exchequer	74,921,873
Excess of Income over Budget Estimate	496,873

BRANCHES OF EXPENDITURE:—	
Debt:—	£
Interest of the Permanent Debt and Management	21,780,028
Terminable Annuities	5,173,653
Interest of Unfunded Debt, &c.	140,797
Consolidated Fund Charges:—	
Civil List	405,963
Annuities and Pensions	329,483
Salaries and Allowances	99,154
Courts of Justice	623,658
Miscellaneous Services	125,329
Supply Services:—	
Army	14,519,433
Army Purchase Commission	579,114
Navy	10,680,404
Vote of Credit—Ashantee Expedition	125,000
Alabama Claims	—
Miscellaneous Civil Services	11,974,127
Customs and Inland Revenue Departments	2,694,908
Post Office	2,911,917
Telegraph Service	1,193,065
Packet Service	972,000
Total Ordinary Expenditure	£74,328,039
Add—Expenses of Fortifications and Localization of Military Forces	600,000
	£74,928,039
Expenditure for year estimated in Budget	£74,527,000
Actual Payments out of Exchequer	74,328,040
Less than Estimates by	198,960

CUSTOMS AND EXCISE.—The Produce of the two great sources of PUBLIC REVENUE, CUSTOMS and EXCISE, which together contribute considerably more than One-Half to the NATIONAL INCOME of the UNITED KINGDOM, was as follows in the financial year ending March 31, 1875, the sums representing Gross Receipts:—

CUSTOMS DUTIES on Articles usually contributing not less than £1,000 Annually.	Gross Receipts. £	s.	d.
Beer, Spruce	2,334	4	1
—— Of other Sorts, including Mum	1,044	9	1
Chicory	63,062	6	3
Cocoa, Cocoa Husks, and Chocolate	40,756	8	2
Coffee	210,486	16	2
Currants	325,548	9	6
Figs	24,704	17	3
Ginger, Preserved	12	3	5
Plate, Gold, and Silver	5,263	15	8
Plums, Dried or Preserved, French Plums and Prunelloes	5,209	15	0
Prunes	6,066	1	6
Raisins	132,751	0	0
Spirits, Colonial and Foreign:—			
Rum	2,732,446	8	3
Brandy	2,265,067	12	10
Geneva	109,142	9	6
Of other sorts	615,629	6	9
Succades and Confectionery, including Fruits and Vegetables preserved in Sugar	291	10	5
Sugar, Unrefined	76,004	3	11
—— Refined, and Sugar Candy	15,758	16	7
—— Molasses	293	15	7
Tea	3,571,426	0	2
Tobacco and Snuff	7,504,854	3	5
Wine	1,721,565	6	10
All other Articles	2,884	6	7
Charges on delivery from the Bonded Warehouses	36,492	4	3
	£19,469,096	11	2
Duties collected at the Isle of Man	44,041	7	0
	£19,513,137	18	2
Duties collected on behalf of the Inland Revenue on the delivery for Home Consumption of British Spirits deposited in the Customs Warehouses (under Act 27 & 28 Vict., c. 11): Receipt	3,289,194	1	11
Gross Produce	£22,802,332	0	1

CUSTOMS DUTIES, contd.	Gross Receipts. £	s.	d.
Deductions on account of Drawbacks, Repayment on Over Entries, &c.	3,428,229	4	8
Net Produce	£19,374,102	7	5

EXCISE DUTIES.	Gross Receipts. £	s.	d.
Chicory	3,200	6	5¾
Licences, viz.:			
Auctioneers, Appraisers, &c.	69,196	0	0
Beer, Cider, and Perry	365,857	4	2
Brewers	479,286	10	3
Dog	317,984	10	0
Establishment, viz.:			
Armorial Bearings	83,064	9	0
Carriages	526,320	7	6
Horses	22,591	15	0
Male Servants	189,962	5	0
Game	196,282	0	0
Gold and Silver Plate	39,501	1	3
Gun	72,133	0	0
Hawkers and Pedlars	20,884	3	0
Horse Dealers	1,662	10	0
Maltsters	15,565	8	1½
Medicine Vendors	7,553	10	0
Pawnbrokers	31,920	0	0
Refreshment House	6,649	15	7½
Spirit (Distillers, Dealers, and Publicans)	784,366	2	5¾
Tobacco	85,729	12	2¾
Wine and Sweets	208,337	5	10¾
Other than the foregoing	6,911	16	1
Malt	7,991,173	13	11½
Race Horses	5,801	19	0
Railways	629,756	5	9
Spirits	15,321,119	4	2
Sugar	473,209	14	9¾
Total Excise	£27,956,020	9	9½
Deductions on account of Drawbacks, Discounts, and Parliamentary Allowances, Allowances and Repayments on Overcharges, &c.	£701,888	4	11½
Net Produce	£27,254,132	4	9¾

STAMPS.—The following table gives the gross receipts from Stamps in the United Kingdom during the financial year ended the 31st of March, 1875:—

Heads of Duty.	Gross Receipts. £	s.	d.
Deeds and other Instruments, not included under the following heads	2,013,936	13	2½
Probates of Wills and Letters of Administration	2,289,240	5	3

Heads of Duty.	Gross Receipts. £	s.	d.
Bills of Exchange . .	919,309	3	5
Bankers' Notes	1,188	15	0
Composition for the Duties on the Bills and Notes of the Banks of England and Ireland, and of Country Bankers .	139,929	8	3
Receipts, Drafts and other 1*d.* Stamps .	775,590	15	6
Marine Insurances . .	125,586	12	10
Licences and Certificates	139,188	10	0
Medicine	114,322	15	7½
Legacies and Successions	3,412,521	10	11
Gold and Silver Plate .	87,169	9	1¼
Cards	13,130	19	0
Patents for Inventions .	155,944	5	0
	£10,187,059	3	1
Fee Stamps, viz.:			
Admiralty Court . .	8,052	0	0
Bankruptcy Court . .	63,455	10	10
Chancery Court. . .	115,078	4	4
Chancery Fund . . .	3,475	14	6½
Civil Bill Fund . . .	20,217	14	6
Civil Service Commission	3,774	12	0
Coal Mines Regulation	999	15	0
Common Law Courts (England) . . .	85,781	17	6
Companies Registration	22,548	16	6
Copyhold, &c., Commission	7,345	0	0
Crown Office	2,854	10	6
Divorce and Matrimonial Causes .	4,190	13	0
Great Seal Patent . .	126	0	0
Judgments Registry Fund.	3,179	7	6
Land Registry . . .	607	3	0
Law Courts, Scotland .	4,738	18	5
Law Fund.	11,102	12	8
London Gazette . .	23,991	15	0
Lord Chancellor's Presentation . .	473	0	0
Naturalisation . . .	308	0	0
Pedlars' Certificates (Metropolis) . .	1,300	10	0
Police Courts . . .	1,572	0	0
Probate Court . . .	155,309	18	6
Public Record . . .	483	10	0
Railway Commission .	441	11	0
Record of Title . . .	45	18	6
Register House, Scotland	38,420	12	4
Registration of Deeds.	13,980	12	11
	£593,855	18	6½
Gross Total . .	£10,780,915	1	7½
Drawbacks, Discounts, Allowances, &c. .	£233,185	12	8¾
Net Produce .	£10,547,729	8	10¾

National Revenue from 1857 to 1875.—The following table shows the total gross amounts of the National Revenue in each of the nineteen financial years ended March 31, from 1857 to 1875, as well as the proportion of receipts per head of population of the United Kingdom:—

Years ended March 31.	Amounts of Revenue.	Proportion of Receipts per head of Population of United Kingdom.
	£	£ s. d.
1857	72,334,062	2 12 1
1858	67,881,513	2 8 3
1859	65,477,284	2 6 3
1860	71,089,669	2 9 10
1861	70,283,674	2 8 11
1862	69,674,479	2 8 3
1863	70,603,561	2 8 4
1864	70,208,964	2 7 7
1865	70,313,437	2 7 0
1866	67,812,292	2 5 1
1867	69,434,568	2 5 8
1868	69,600,218	2 5 6
1869	72,591,991	2 6 8
1870	75,434,252	2 8 4
1871	69,945,220	2 4 5
1872	74,708,314	2 7 3
1873	76,608,770	2 8 2
1874	77,335,657	2 8 2
1875	74,921,873	2 6 3

National Expenditure from 1857 to 1875.—The following table exhibits the total amount of National Expenditure in each of the nineteen financial years ended March 31, from 1857 to 1875, together with the proportion of expenditure per head of population of the United Kingdom:—

Years ended March 31.	Amounts of Expenditure.	Proportion of Payments per Head of Population of United Kingdom.
	£	£ s. d.
1857	75,588,667	2 14 4
1858	68,128,859	2 8 5
1859	64,663,882	2 5 8
1860	69,502,289	2 8 8
1861	72,792,059	2 10 8
1862	71,116,485	2 9 11
1863	69,302,008	2 8 2
1864	67,056,286	2 6 0
1865	66,462,207	2 5 0
1866	65,914,357	2 4 2
1867	66,780,396	2 4 0
1868	71,236,242	2 6 6
1869	74,972,816	2 8 6
1870	68,864,752	2 4 0
1871	69,548,539	2 4 3
1872	71,490,020	2 5 0
1873	71,022,448	2 4 5
1874	76,466,510	2 7 7
1875	74,318,040	2 5 10

NATIONAL DEBT.—The following table shows the total amount of the Funded Debt of the United Kingdom for the financial year ended 31st of March, 1874, the Debt reduced in the year ended 31st March, 1875, and the balance at the latter date:—

	£	s.	d.
Total Funded Debt on 31st March, 1874 .	723,514,005	0	0
Debt reduced in the year ended 31st March, 1875 . . .	8,716,289	0	0
Balance, being total amount of Funded Debt on 31st March, 1875	714,797,716	0	0

The following table shows the state of the above Public Funded Debt of the United Kingdom on 31st March, 1875:—

Great Britain. Capitals.	£	s.	d.
Capital Funded Debt:—			
New Annuities, at 2½ per cent.	3,792,079	3	9
Exchequer Bonds, created per 16 Vict., c. 23, at 2½ per cent.	418,300	0	0
Total, at 2½ per cent .	£4,210,379	3	9
Debt due to the Bank of England, at 3 per cent.	11,015,100	0	0
Consolidated Annuities, at 3 per cent.	389,167,173	19	10
Reduced Annuities, at 3 per cent. . . .	94,757,319	6	1
New Annuities, at 3 per cent.	179,394,264	12	4
Total, at 3 per cent. .	£674,333,857	18	3
New Annuities, at 3½ per cent.	225,746	6	4
Total, Great Britain	£678,769,983	8	4
Ireland.	£	s.	d.
New Annuities, at 2½ per cent.	2,330	0	0
Debt due to the Bank of Ireland, at 3 per cent.	2,630,769	4	8
Consolidated Annuities, at 3 per cent..	5,384,499	16	7
Reduced Annuities, at 3 per cent. . . .	139,287	18	8
New Annuities, at 3 per cent.	27,870,845	0	10
Total, at 3 per cent. .	£36,025,402	0	9
Total, Ireland . . .	£36,027,732	0	9
Total Capital of the Funded Debt of the United Kingdom, on 31st March, 1875 .	714,797,715	9	1

CHARGES ON NATIONAL DEBT.—The following table shows the charges on the Debt for the financial year ended the 31st of March, 1875:—

	Annual Charge. £	s.	d.
Total Debt on 31st March, 1874:—			
Funded Debt	21,685,439	9	9
Terminable Annuities:			
Annuities, per 18 Vict., c. 18, expiring 5 April, 1885. . .	116,000	0	0
Annuities, per 23 & 24 Vict., c. 109, and subsequent Acts, expiring 5 April, 1885 (Fortifications) . .	510,542	0	0
Annuity, per 26 Vict., c. 14, expiring 5 April, 1885. . .	9,983	7	3
Annuities, per 32 & 33 Vict., c. 59, and 29 Vict., c. 5, expiring at various dates in 1885 (payable yearly)	2,966,164	0	0
Annuity, per 35 & 36 Vict., c. 68, expiring at various dates in 1885, "The Military Forces Localization Act"	31,754	0	0
Red Sea and India Telegraph Company's Annuity, 25 & 26 Vict., c. 39, expiring 4th August, 1908 .	36,000	0	0
Sinking Fund Annuity on New 2½ per Cents., per Act 16 Vict., c. 23	6,906	14	7
Annuities for a Term of Years, per 10 Geo. 4, c. 24, and 3 Will. 4, c. 14, expiring at various periods	45,124	13	0
Life Annuities, per 10 Geo. 4, c. 24, 3 Will. 4, c. 14, 16 & 17 Vict. c. 45, and 27 & 28 Vict. c. 43 . . .	931,961	8	0
Exchequer Tontine Annuities, per 29 Geo. 3	14,347	9	2
Management:			
Great Britain . . .	212,280	2	1
Ireland	10,189	14	0
Total amount of charge on Funded Debt 31st March, 1874 . . .	26,576,692	17	10
Debt created in the year ended 31st March, 1875:—			
Funded Debt	Nil.		
Terminable Annuities:—			
Annuities (expiring 1885) granted per Act 32 & 33 Vict., c. 76 (Fortifications)	34,863	0	0

	Annual Charge. £	s.	d.
Annuities (expiring 1885), granted per 35 & 36 Vict., c. 68, "The Military Forces Localization Act, 1872"	33,732	0	0
Annuities for Terms of Years, per 10 Geo. 4, c. 24	2,612	3	0
Life Annuities, per 10 Geo. 4, c. 24, 3 Will. 4, c. 14, 16 & 17 Vict., c. 45, and 27 & 28 Vict., c. 43 .	59,253	12	4
Annuities (expiring 1885) created in lieu of 7,000,000*l.* Stock, cancelled per Act 29 Vict. c. 5	651,681	0	0
Contributors' Shares in Exchequer Tontine Annuities increased	638	13	7
Total charges on Debt created in the year ended 31st March, 1875	782,780	8	11
General Total . . .	£27,359,473	6	9

TEN YEARS' NATIONAL INCOME AND EXPENDITURE.—A return, obtained by Mr. Childers, has been issued "of the total public income and expenditure of the United Kingdom, according to the actual receipt and issue at the Exchequer, during each of the ten years ended March 31, 1866, to March 31, 1875 inclusive, and of the surplus of income above expenditure for each such year, certified during the following quarter by the Treasury to the National Debt Commissioners, as prescribed by the Acts 10 Geo. 4, cap. 27, sec. 1, and 29 and 30 Vict., cap. 39, sec. 16." This return shows that in the year ended March 31, 1866, the total public income was 67,812,292*l.* 4*s.* 6*d.*, the total public expenditure was 65,914,356*l.* 13*s.* 3*d.* (including 560,000*l.* for fortifications); and the surplus certified by the Treasury to the National Debt Commissioners was 1,337,935*l.* 11*s.* 3*d.* In 1866–7, the total income was 69,434,567*l.* 15*s.* 9*d.*; the total expenditure was 66,780,395*l.* 18*s.* 6*d.* (including 450,000*l.* fortifications); and the certified surplus, 2,204,171*l.* 17*s.* 3*d.* In 1867–8, the total income was 69,600,218*l.* 4*s.* 1*d.*; the expenditure 71,236,231*l.* 17*s.* 7*d.* (including 530,000*l.* fortifications); and the certified surplus, nil. In 1868–9, the total income was 72,591,991*l.* 12*s.* 8*d.*; the expenditure, 74,972 816*l.* 2*s.* 9*d.* (including 525 000*l.* fortifications); and the certified surplus, nil. In 1869–70, the total income was 75,434,252*l.* 10*s.* 6*d.*; the expenditure, 68,864,751*l.* 19*s.* 6*d.* (including 200,000*l.* fortifications); and the certified surplus 63 695,000*l.* 11*s.* In 1870–71, the total income was 69,945,220*l.* 10*s.* 8*d.*; the expenditure, 69,548,539*l.* 12*s.* 2*d.* (including 150,000*l.* fortifications); and the estimated surplus, 246,680*l.* 18*s.* 6*d.* In 1871–72, the total income was 74,708,314*l.* 13*s.* 1*d.*; the expenditure, 71,490,020*l.* 6*s.* 5*d.* (including 370,000*l.* fortifications), and the certified surplus, 2,848,294*l.* 6*s* 8*d.* In 1872–73, the total income was 76,608,770*l.* 5*s.* 1*d.*; the expenditure, 70,714,448*l.* 4*s* 8*d.* (including 308,000*l.* fortifications and localisation of military forces); and the certified surplus, 5,586,322*l.* 0*s.* 5*d.* In 1873–74, the total income was 77,335,656*l.* 17*s.* 1*d.*; the expenditure, 76,466,510*l.* 2*s.* 4*d.* (including 500,000*l.* fortifications and localization of military forces); and the certified surplus, 369,146*l.* 14*s.* 9*d.* In 1874–75 the total income was 74,921,872*l.* 14*s.* 1*d.*; the expenditure, 74,328,039*l.* 13*s.* 3*d.* (including 600,000*l.* fortifications and localization of military forces); and the certified surplus, nil.

COINAGE OF THE ROYAL MINT.—The amount of gold, silver, and copper moneys coined at the Royal Mint in each year from 1859 to 1874 was as follows:—

Years.	Gold. £	Silver. £	Copper. £
1859	2,649,509	647,064	8,512
1860	3,121,709	218,403	37,990
1861	8,190,170	209,484	273,578
1862	7,836,413	148,518	352,800
1863	6,997,212	161,172	151,648
1864	9,535,597	535,194	18,069
1865	2,367,614	501,732	57,493
1866	5,076,676	493,416	50,624
1867	496,397	193,842	33,301
1868	1,653,384	301,356	16,328
1869	7,372,204	76,428	20,832
1870	2,313,384	336,798	32,704
1871	9,919,656	701,514	7,616
1872	15,261,442	1,243,836	47,413
1873	3,384,568	1,081,674	46,218
1874	1,461,565	890,604	65,632

THE REDUCTION OF THE NATIONAL DEBT.—A return obtained by Mr. Childers has been issued, "showing the estimated amount of stock to be purchased in each year, from 1875-6 to 1904-5 inclusive, under the operation of the plan applying a fixed sum of 28,000,000*l.* annually to the interest and reduction of the National Debt." From this return it appears that the total amount of stock to be purchased in the ten years ending 1884-85 is 6,795,000*l.*, and the additional amount to be purchased out of surplus revenue, by life annuities, &c., is 13,073,000, making a total of 19,868,000*l.* In the thirty years, ending 1904-5, the total amount of stock to

be purchased from the 28,000,000*l.* is 192,485,300*l.*, and the additional amount, 39,219,000*l.*, or a total of 231,704,300*l.*

THE IRISH LOAN FUND BOARD.—In the yearly statement of the Irish Loan Fund Board, the sums circulated by this agency throughout Ireland are tabulated for the thirty-two years ended with 1874. From 1843 to 1846 the moneys yearly loaned out averaged from 1,700,000*l.* to 1,800,000*l.* As the potato famine approached the loans greatly decreased, and in 1848 the total advances amounted to 719,000*l.* only; since that date they have greatly varied, falling continually of late years, so that, according to last year's return, the loans were but 523,000*l.* The Board attribute the earlier decline from the initial amounts to the results of the famine, extensive emigration, and mortality. Other causes, they state, have contributed to the decrease of the loan fund circulation. They report that the decrease of recent years is attributable "partly to alterations for the better in that portion of the industrious agricultural poor of Ireland which constituted the Boscowen class of loan funds; but largely it must be ascribed to the practice which has been adopted by the branch banks throughout the country to a large extent issuing loans so low as 10*l.*, and even 5*l.*, to borrowers of the class of small farmers and dealers on a small scale, who could only heretofore get loans of such small amounts from loan funds." The number of loans issued last year was 107,173*l.*, and as the sum circulated then was 523,048*l.*, the average loan was under 5*l.* The sum in borrowers' hands at the close of last year was 127,990*l.* The discount received by the Board in 1874 amounted to 11,012*l.*; at the same time the fines on borrowers were 3,751*l.* The gross profit of these transactions was 15,977*l.* derived from discounts, fines, and papers. The promissory notes, which before 1872 were charged to the borrowers at 1*d.* each, are now taxed at 2*d.* Altogether there were in 1874 215 paid servants; the salaries and wages for the year were 7,024*l.*; the total cost of management, which curiously includes "loss on notes," was 8,852*l.* Interest paid by the Board for capital, 4,164*l.*; this to 1,015 depositors. The Board put forth a net loss, from which bad debts have been deducted, of 1,062*l.*, the said debts being apparently 1,035*l.* Net profit after declaring bad debts 2,908*l.* Then there is a final item, headed "Amount actually expended for charitable or useful local purposes in 1874, which amounted to 1,380*l.* 12*s.*

TAXATION.—A return has been furnished to the House of Commons relating to property and income tax assessment, poor rate, &c., from 1814–15 to 1873–74. In the first year the amount of property and profits assessed was 168,234,808*l.*, and increased to 437,611,490*l.* last year. Returns are given in reference to the poor rate assessment and poor rate expenditure over the same period. In 1814-15 the relief to the poor only amounted to 5,418,846*l.*, and for all other purposes 2,090,008*l.* The total poor rate expenditure in that year was 7,508,854*l.*, and in 1873-74 the relief to the poor only 7,664,957*l.*; for other purposes (generally) 4,408,909*l.*, and 777,141*l.* (specially) highway rate transferred to the poor rate. The total poor rate expenditure last year was 12,851,007*l.*

ARMY PRIZE MONEY.—A parliamentary return relating to army prize money shows a total expenditure from January 18, 1809, to December 31, 1874, of 1,887,686*l.* 2*s.* 7*d.*, which is 20,095*l.* 2*s.* 3*d.* more than the apparent receipts. It is explained in a memorandum, signed by the secretary to the Commissioners of Chelsea Hospital, that this arises from profit on sale of stock which had been purchased at low prices. From this source also are obtained a cash balance of 1,534*l.* 5*s.* 6*d.* in the hands of the treasurer on the 31st of December, 1874, and 75,000*l.* Consols, held for the Commissioners at same date. This stock constitutes a fund sufficient to meet all anticipated claims, and the dividend thereon is, in the meantime, devoted (under the provisions of legal enactments, and with the sanction of the Treasury) to the maintenance of the hospital grounds, and to other purposes for the benefit of the hospital.

LIABILITY OF NATIONAL DEBT COMMISSIONERS TO FRIENDLY SOCIETIES.—A return obtained by Mr. Goschen "showing in respect of each year since 1865 inclusive the increase of the deficiency in the assets of the National Debt Commissioners, in respect of their liabilities to friendly societies," has just been issued as a Parliamentary paper. It shows that on the 20th of November, 1865, the deficiency was 844,505*l.* In 1866 there was an increase in the deficiency of 35,945*l.*, but in 1867 there was a decrease of 8,053*l.* In each succeeding year there has been an increase of deficiency as follows:—In 1868, 44,358*l.*; in 1869, 41,823*l.*; in 1870, 57,200*l.*; in 1871, 35,755*l.*; in 1872, 50,822*l.*; in 1873, 44,117*l.*; in 1874, 42,492*l.* The deficiency in 1874, was 1,188,964*l.*, the total increase of deficiency since 1865 being 344,459*l.*

2. GENERAL COMMERCE AND NAVIGATION.

NAVIGATION RETURNS.—The subjoined table shows the tonnage of British and Foreign vessels (sailing and steam) entered and cleared, *with cargoes*, at ports in the United Kingdom, from and to foreign countries and British Possessions, from 1859 to 1874:—

Years.	Entered.			Cleared.		
	British.	Foreign.	Total.	British.	Foreign.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1859 ..	5,391,925	3,698,718	9,090,643	6,222,746	4,021.217	10,243,963
1860 ..	5,760,537	4,294,444	10,054,981	6,358,917	4,424,020	10 782,937
1861 ..	6,307,737	4,297,442	10,605,179	6,841,808	4,477,996	11,319,804
1862 ..	6,591,654	4,149,154	10,740,808	7,400,454	4,309.395	11,709,849
1863 ..	7,302,039	3,835,319	11,137,358	7,961,008	3,926,797	11,887,805
1864 ..	7,813,179	3,488,931	11,302,110	8,596,234	3,576,540	12,172,774
1865 ..	8,356,914	3,801,780	12,158,694	9,056,729	3,770.422	12,827,151
1866 ..	9,215,820	4,061,370	13,277,190	9,954,147	4,055.947	14,010,094
1867 ..	9,356,814	3,984,634	13,341,448	10,586,058	4,261,523	14,847,581
1868 ..	9,572,450	4,279,207	13.851,657	10,902,171	4,570,848	15.473,019
1869 ..	10,042,182	4,444.518	14,486,700	11,313,757	4,603,227	15,916,984
1870 ..	10,308,952	4,601,790	14,910,742	11,934,087	4,779,851	16,713,938
1871 ..	11,250,120	5,205,222	16,455,342	13,396,583	5,650,872	19,047,455
1872 ..	12,139,805	5,766,135	17,905,940	13,574,471	5,673,881	19,248,352
1873 ..	12,474,912	6,320,145	18,795,057	13,653,030	5,486,335	19,139,365
1874 ..	12,751,128	6,330,278	19,081,406	14,010,786	5,742,701	19,753,487

IMPORTS INTO THE UNITED KINGDOM.—The following table gives the quantities of the chief articles imported into the United Kingdom in the year ended the 31st of December, 1874:—

Articles.		Quantity.
Animals:—		
Oxen, Bulls, Cows, and Calves	No.	193,862
Sheep and Lambs	,,	758,915
Bacon and Hams	Cwts.	2,542,095
Beef	,,	261,721
Bones, except Whalefins	Tons	92,158
Brimstone	Cwts.	1,044,116
Bristles	Lbs.	2,664,374
Butter	Cwts.	1,619,808
Candles, Stearine	,,	117,941
Caoutchouc	,,	129,163
Cheese	,,	1,485,265
Clocks	No.	420,856
Cocoa	Lbs.	17,909,478
Coffee	,,	157,433,381
Corn, Wheat	Cwts.	41,527,638
—— Barley	,,	11,335,396
—— Oats	,,	11,387,768
—— Maize	,,	17,693,625
—— Other kinds	,,	4,724,235
Corn, Flour of Wheat	Cwts.	6,236,044
—— —— Of other kinds	,,	93,130
Total of Corn	,,	92,997,836
Cotton, Raw	,,	13,989,861
Dyeing (or Tanning) Stuffs:—		
Cochineal, Granilla, and Dust	Cwts.	39,393
Cutch and Gambier	Tons	21.032
Garancine	Cwts.	53,006
Indigo	,,	85,707
Madder	,,	65,355
Madder Root	,,	148,002
Shumach	Tons	16,514
Valonia	,,	26,336
Eggs	No.	680,552,280
Fish	Cwts.	661,406
Flax and Hemp:—		
Flax, Dressed and Undressed	,,	2,026,113
Tow or Codilla of Flax and Hemp	,,	406,500
Hemp and other like Substances (except Jute), Dressed and Undressed	,,	1,236,475
Jute	,,	4,270,164
Fruits:—		
Currants	Cwts.	972,455
Raisins	,,	505,391
Oranges and Lemons	Bush.	2,405,054
Glass of all Kinds	Cwts.	946,903
Guano	Tons	112,429
Gutta-percha	Cwts.	29.970
Hair:—		
Goats' Hair or Wool	Lbs.	7,954,658
Hides, Tanned and Untanned	Cwts.	1,538,079
Hops	,,	145,994

Articles.		Quantity.
Lard	,,	374,328
Leather Gloves	Pairs	13,512,936
Meat, Salted or Fresh	Cwts.	119,403
—— Preserved, other than Salted	,,	265,223
Metals:—		
Copper Ore and Regulus	Tons	76,290
Copper, Unwrought and part Wrought, and old Copper	Cwts.	781,260
Iron, in Bars, Unwrought	Tons	73,469
Iron and Steel Wrought or Manufactured	Cwts.	1,054,019
Lead, Pig and Sheet	Tons	61,987
Tin, in Blocks, Ingots, Bars, or Slabs, and Regulus	Cwts.	184,354
Zinc, Crude, in Cakes	Tons	22,193
—— Manufactures	Cwts.	252,893
Oil, Fish	Tuns	17,051
—— Palm	Cwts.	1,067,767
—— Cocoa Nut	,,	134,196
—— Olive	Tuns	22,720
—— Seed	,,	17,803
—— Turpentine	Cwts.	275,904
Oil Seed Cake	Tons	157,718
Paper, for Printing or Writing	Cwts.	192,153
Petroleum, Unrefined	Galls.	645,876
———— Refined	,,	20,817,485
Pork	Cwts.	322,574
Potatoes	,,	3,986,662
Pyrites of Iron or Copper	Tons	498,637
Rags and Paper-making Materials:—		
Rags	Tons	17,209
Esparto and other Materials	,,	128,782
Rice, not in the Husk	Cwts.	7,043,779
—— In the Husk	Qrs.	12,181
Rosin	Cwts.	1,070,655
Saltpetre	,,	296,431
———— Cubic Nitre	,,	2,118,552
Seeds:—		
Clover and Grass	,,	256,159
Cotton	Tons	190,591
Flax and Linseed	Qrs.	1,682,048
Rape	,,	289,046
Silk Knubs or Husks and Waste	Cwts.	35,141
Silk, Raw	Lbs.	5,911,831
—— Thrown	,,	114,601
Skins:—		
Sheep and Lamb, Undressed	No.	6,559,311
Skins, Tanned, Tawed or Dressed	No.	3,628,998
Seal	,,	855,005
Goat, Undressed	,,	1,436,228
—— Tanned, Tawed or Dressed	,,	5,506,678
Spices:—		
Cinnamon	Lbs.	1,176,522
Pepper	,,	19,648,118
Of all other sorts	,,	12,371,371

Articles.		Quantity.
Spirits:—		
Rum	Pf. Gals.	8,150,372
Brandy	,,	3,378,057
Other Foreign and Colonial Spirits	,,	2,285,112
Total of Spirits	,,	13,813,541
Sugar, Refined and Sugar Candy	Cwts.	2,717,406
—— Raw	,,	14,130,041
—— Molasses	,,	338,552
Tallow and Stearine	,,	1,155,243
Tea	Lbs.	162,782,810
Teeth, Elephants', Sea-Cow, and Sea Horse	Cwts.	13,365
Tobacco, Manufactured, Cigars, and Snuff	Lbs.	4,632,581
—— Unmanufactured	,,	76,175,215
Wine	Gals.	18,234,972
Wood and Timber:—		
Hewn	Loads	2,246,525
Sawn or Split	,,	3,841,011
Staves	,,	125,954
Mahogany	Tons	64,674
Wool,—Sheep, Lamb, Alpaca, and the Llama Tribe	Lbs.	344,470,897
Woollen Rags	Tons	25,581
Woollen and Worsted Yarn:—		
Berlin Wool and Yarn used for Fancy Purposes	Lbs.	533,320
Yarn for Weaving	,,	13,131,850
Yeast, Dried	Cwts.	153,811

EXPORTS OF HOME PRODUCE FROM THE UNITED KINGDOM.—The following table shows the quantities of the chief articles of British and Irish produce and manufactures exported from the United Kingdom in the year ended the 31st of December, 1874:—

Principal Articles.		Quantity.
Alkali	Cwts.	5,010,616
Animals: Horses	No.	3,050
Arms and Ammunition:—		
Firearms (Small)	No.	235,413
Gunpowder	Lbs.	14,930,995
Bags, Empty	Dozs.	4,700,759
Beer and Ale	Brls.	559,413
Books, Printed	Cwts.	84,353
Butter	,,	42,688
Candles, of all sorts	Lbs.	5,458,753
Carriages, Railway	No.	3,154
Cement	Cwts.	4,900,338
Cheese	,,	18,689
Coals, Cinders, and Fuel	Tons	13,927,205
Cordage and Twine	Cwts.	128,722
Corn: Wheat	,,	344,666
——— Wheat Flour	,,	95,213
Cotton Yarn	Lbs.	220,682,919

Principal Articles.		Quantity.
Cotton Manufactures:—		
Piece Goods, White or Plain	Yds.	2,586,709,684
——— Printed, Checked, or Dyed	,,	1,003,101,107
———, of Mixed Materials	,,	16,828,253
Total of Piece Goods	,,	3,606,639,044
Stockings	Doz. Prs.	1,020,242
Thread for Sewing	Lbs.	9,013,430
Fish: Herrings	Brls.	852,630
Glass: Plate	Sq. Ft.	1,411,268
——— Flint	Cwts.	101,762
——— Common Bottles	,,	890,822
——— Of other Sorts	,,	121,669
Hats of all Sorts	Dozs.	632,686
Leather, Tanned, Unwrought	Cwts.	148,246
—— Wrought, Boots and Shoes	Lbs.	410,114
—— Of other Sorts	,,	2,078,837
Linen and Jute Yarn:		
Linen Yarn	,,	27,154,906
Jute Yarn	,,	15,724,988
Linen and Jute Manufactures:—		
Linen Manufactures:		
White or Plain	Yds.	180,926,285
Printed, Checked, or Dyed	,,	8,987,132
Sailcloth and Sails	,,	4,769,047
Total of Piece Goods	,,	194,682,464
Thread for Sewing	Lbs.	2,690,059
Jute Manufactures	Yds.	112,810,415
Metals:—		
Iron, Old, for remanufacture	Tons	43,141
—— Pig, and Puddled	,,	776,116
—— Bar, Angle, Bolt, and Rod	,,	258,953
—— Railroad, of all Sorts	,,	782,665
—— Wire	,,	36,692
—— Hoops, Sheets, and Boiler Plates	,,	168,430
—— Tinned Plates	,,	122,960
—— Cast or Wrought, and all other manufactures	,,	257,069
—— Steel, unwrought	,,	31,440
—— Manufactures of Steel, or of Steel and Iron combined	,,	10,056
Total of Iron and Steel	,,	2,487,522
Copper, Unwrought:—		
Ingots, Cakes or Slabs	Cwts.	214,031

Principal Articles.		Quantity.
Copper, Wrought or partly Wrought:—		
Mixed or Yellow Metal	Cwts.	281,128
Of other Sorts	,,	211,127
Brass of all Sorts	,,	104,760
Lead, Pig, Sheet and Pipe	Tons	36,713
Tin, Unwrought	Cwts.	154,613
Zinc, Wrought and Unwrought	,,	75,855
Oil, Seed	Gals.	13,096,478
Paper (other than Hangings)	Cwts.	281,761
Salt	Tons	828,109
Silk Manufactures:—		
Broad Piece Goods	Yds.	4,025,459
Soap	Cwts.	219,129
Spirits, British	Galls.	1,213,162
Sugar, Refined	Cwts.	922,342
Wool, Sheep and Lamb	Lbs.	10,077,619
Woollen and Worsted Yarn	,,	34,981,008
Woollen and Worsted Manufactures:—		
Cloths, Coatings, &c., Unmixed and Mixed	Yds.	40,331,686
Flannels, Blankets, Blanketing, and Baizes	,,	16,004,436
Worsted Stuffs, Unmixed and Mixed	,,	261,135,081
Carpets and Druggets	,,	9,208,271

EXPORTS OF FOREIGN AND COLONIAL MERCHANDISE FROM THE UNITED KINGDOM.—The following table gives the quantity of the exports of foreign and colonial merchandize from the United Kingdom, in the year ended the 31st of December, 1874:—

Articles.		Quantity.
Bark, Peruvian	Cwts.	34,821
Caoutchouc	,,	53,405
Chemical Manufactures and Products	Value	£229,923
Cocoa	Lbs.	7,730,795
Coffee	,,	120,935,793
Corn, Wheat	Cwts.	719,998
—— Wheat Meal or Flour	,,	110,710
Cotton, Raw	,,	2,312,211
Cotton Manufactures:—		
Piece Goods	Pieces	360,582
Other Articles	Value	£95,990
Drugs, Unenumerated	,,	276,129
Dyeing Stuffs:—		
Cochineal, Granilla, and Dust	Cwts.	23,848
Indigo	,,	61,961
Madder	,,	519
Madder Root	,,	874

Articles.		Quantity.
Flax and Hemp:—		
Flax, Dressed and Undressed. . .	Cwts.	25,074
Tow or Codilla of Hemp and Flax .	,,	36,204
Hemp and other like Substances (except Jute), Dressed and Undressed. . . .	,,	128,000
Jute	,,	716,631
Fruit:—		
Currants	,,	145 034
Raisins	,,	102,521
Guano	Tons	11,033
Hair, Manufactures of, and of Goats' Wool	Val.	£7,124
Hides, Tanned and Untanned . . .	Cwts.	443,844
Metals:—		
Copper, Unwrought, Part Wrought, and old Copper .	Tons	24,310
Iron in Bars, Unwrought . . .	,,	24,420
Zinc, Crude, in Cakes	,,	530
Tin, in Blocks, Ingots, Bars, or Slabs, and Regulus	Cwts.	47,630
Oil, Palm	,,	409,594
— Cocoa Nut . . .	,,	217,148
— Olive	Tuns	1,673
Opium	Lbs.	306,374
Quicksilver	,,	2,422,299
Rice, not in the Husk .	Cwts.	4,095,751
Saltpetre	,,	20,731
——— Cubic Nitre .	,,	114,763
Seeds, Flax and Linseed	Qrs.	10,976
——— Rape	,,	5,042
Silk, Raw	Lbs.	2,741,842
—— Thrown	,,	21,860
Silk Manufactures . .	Val.	£341,673
Spices, Cinnamon . .	Lbs.	1,208,764
——— Pepper. . . .	,,	16,327,650
Spirits:—Proof		
Rum	Gallons	1,554,063
Brandy	,,	271,243
Geneva, and other Foreign and Colonial Spirits. .	,,	1,655,468
Total of Spirits	,,	3,480,774
Sugar, Foreign, Refined, and Candy .	Cwts.	143,786
——— Unrefined . . .	,,	382,260
——— Molasses . . .	,,	65,259
Tea	Lbs.	31,358,495
Teeth, Elephants', Sea Cow, and Sea Horse	Cwts.	7,930
Tobacco, Stemmed . .	Lbs.	1,666,032
——— Unstemmed. .	,,	15,580,710
——— Manufactured, viz:—		
Cigars	Lbs.	391,999
Other Sorts	,,	1,553,095
Wine	Gallons	1,676,993
Wool, Sheep, Lamb, Alpaca, and Llama	Lbs.	144,294,663

Export Markets of the United Kingdom.—The following table, compiled from Returns of the Board of Trade, gives the declared value of the British and Irish produce exported from the United Kingdom to Foreign countries and British possessions in the year ended the 31st of December, 1874, first taking the exports to foreign countries:—

I. Foreign Countries.

Countries.	Value.
	£
Russia, Northern Ports . . .	6,936,366
——— Southern Ports . . .	1,840,102
Sweden and Norway	5,400,939
Denmark, Iceland, and the Duchies in 1860 . . .	2,519,522
——— Danish West Indies.	340,789
Germany, exclusive of the Duchies in 1860 . . .	24,799,846
Holland	14,427,113
——— Java, and other Possessions in the Indian Seas	1,280,571
Belgium	5,828,092
France	16,370,274
——— Algeria	47,953
——— Possessions in Senegambia	17,965
——— Possessions in India .	—
Portugal	2,706,990
——— Azores and Madeira.	349,755
Spain	4,064,231
——— Canary Islands . . .	197,736
——— Fernando Po	13,122
——— West India Islands . .	1,857,7[illegible]8
——— Phillipine Islands . .	456,953
Italy, exclusive of Venetia in 1860	6,369,609
Austrian Territories (including Venetia in 1860).	1,063,649
Greece	1,010,313
Turkey	7,037,707
——— Wallachia and Moldavia	1,244,871
Egypt	3,585,106
Morocco	443,416
United States.	28,241,809
Mexico	1,124,613
Central America	157,078
Haiti and San Domingo. . .	441,952
New Granada (United States of Columbia)	2,570,952
Venezuela	506,443
Ecuador	65,153
Brazil	7,678,453
Uruguay	1,22[illegible],038
Argentine Republic	3,128,142
Chili	2,751,094
Peru	1,593,261
China (exclusive of Hong Kong)	4,751,103
Japan	1,282,899
Western Coast of Africa . .	905,804
Other Countries	644,477
Total of Foreign Countries .	167,278,029

II. British Possessions.

Countries.	Value. £
Channel Islands	817,246
Gibraltar	1,135,179
Malta	821,981
Ionian Islands (ceded to Greece 1st June, 1864)	—
North American Colonies:—	
British Columbia	
Hudson's Bay Company Settlements	
Canada	8,849,747
New Brunswick	
Nova Scotia	
Prince Edward Island	
Newfoundland	482,372
Total of North American Colonies	9,332,119
West India Islands and Guiana	3,282,764
British Honduras	146,584
Australia:—	
West Australia	202,896
South Australia	1,908,732
Victoria	6,930,260
New South Wales	4,375,335
Queensland	868,865
Tasmania	359,432
New Zealand	4,408,400
Total of Australia	19,062,920
British India	24,080,693
The Straits Settlements	2,701,526
Ceylon	1,158,283
Hong Kong	3,650,963
Mauritius	545,767
Cape of Good Hope and Natal	4,301,761
Possessions on the River Gambia	71,103
Sierra Leone	301,757
Possessions on the Gold Coast	480,228
Other Possessions	389,218
Total of British Possessions	72,280,092
Total of Foreign Countries and British Possessions	239,558,121

Value of Imports in 1874.—The total value of the exports and imports for the year 1874, as shown by the statistical abstract of the United Kingdom recently published, was 667,733,165*l.*, or 20*l.* 11*s.* 10*d.* per head of the population. This sum shows a considerable reduction on the two previous years, when the value per head of population was 21*l.* 4*s.* 9*d.* in 1873, and 21*l.* 0*s.* 6*d.* in 1872; but it is greatly in excess of all previous years, and has increased from a total of 375,052,224*l.*, or 13*l.* 0*s.* 7*d.* per head of population, in the year 1860. The total value of the imports only was 370,082,701*l.*, or 11*l.* 8*s.* 3*d.* per head of population, in 1874, being a reduction of 1,204,671*l.*, or 2*s.* 11*d.* per head of population on the previous year. The value of the imports has risen during the past fourteen years from 210,530,873*l.*, or 7*l.* 7*s.* per head of population, at which it stood in 1860. In many articles in which the value of the imports had increased most noticeably in 1873, as compared with 1872, there was a great reduction in 1874. This was the case with animals (oxen, bulls, cows, and calves), the value of which stood at 3,354,043*l.* in 1873, but fell to 3,296,460*l.* last year. Sheep and lambs fell from 1,822,531*l.* to 1,610,355*l.*; bacon and hams, from 6,245,230*l.* to 5,902,429*l.*; coffee, from 7,230,351*l.* to 7,064,788*l.*; wheat, from 28,538,746*l.* to 25,236,932*l.*; raw cotton, from 54,704,847*l.* to 50,696,496*l.*; fish, from 1,003,236*l.* to 981,950*l.*; guano, from 2,103,531*l.* to 1,348,849*l.*; olive oil, rom 1,559,183*l.* to 1,017,461*l.*; potatoes, from 2,120,154*l.* to 1,034,835*l.*; raw silk, from 6,758,138*l.* to 4,966,325; undressed skins (sheep and lamb), from 1,322,848*l.* to 894,784*l.*; brandy, from 2,375,447*l.* to 1,457,478; raw sugar, from 17,066,026*l.* to 15,837,617*l.*; and wine, from 8,267,326*l.* to 6,863,465*l.* The most noticeable increase in the value of the imported articles was in butter, which had risen from 6,955,264*l.* in 1873 to 9,050,025*l.*, an increase of two millions; silk (broad stuffs), from 5,444,289*l.* to 7,336,356*l.*; hewn timber, from 6,722,689*l.* to 7,884,209*l.*; sawn or split timber, from 10,565,310*l.* to 12,508,653*l.*; wool (sheep lamb, alpaca, and the Llama tribe), from 19,541,678*l.* to 21,116,184*l.*; and Berlin wool and yarn, used for fancy purposes, from 59,194*l.* to 107,471*l.* In some articles the value of the imports was almost stationary, as in tea, which remained a little over eleven millions; copper and iron pyrites, which only fell from 1,301,272*l.* to 1,253,232*l.*; refined petroleum, which fell from 979,005*l.* to 962,377*l.*; currants, which rose from 1,275,445*l.* to 1,290,574; oranges and lemons, which rose from 1,124,248*l.* to 1,163,296*l.*; eggs, which rose from 2,359,022*l.* to 2,433,134*l.*; wheat flour, which fell from 5,849,852*l.* to 5,685,076*l.*; cheese, which rose from 4,061,456*l.* to 4,483,927*l.* In the last fourteen years the value of the imports of animals has more than doubled; that of bacon and ham is six times what it was in 1860, when it was under a million, while it has now nearly reached six millions; butter has more than doubled, cheese has nearly trebled, corn and flour has risen by twenty millions, raw cotton by fifteen, eggs from half a million to nearly two-and-a-half millions, tanned and untanned hides from three to six millions; European manufactured silks, from three to eleven millions; tea from seven to eleven-and-a-half millions; hewn timber and wood from nearly five to nearly eight; and sawn or split timber from five to twelve-and-a-half; and wool, from eleven to twenty-one. Last year was one of the few years during the last fourteen, in

which there had been any falling off in the total value of the imports. In 1865 there was a fall of three millions, but this was compensated for by a rise of twenty-four in 1866; in 1867 the value again receded by an amount of twenty millions, but in 1868 it again rose to within half a million of the value of 1866, and from that year to 1873, there was a steady and increasing rise. The increase during the whole fourteen years gives an average annual rise in the value of imports of upwards of 11,000,000*l.*

VALUE OF EXPORTS IN 1874.—The value of our exports of British produce and of foreign and colonial produce in the year 1874, was considerably below the total of the two previous years, but the falling off was entirely in the British and colonial articles, as the exports of foreign and colonial produce showed a rise of more than two millions. In 1872 the total exports amounted to 314,588,834*l.*; in 1873 to 311,004,765*l.*; and last year the value fell to 297,650,464*l.*—the proportion per head of population being 9*l.* 3*s.* 7*d.*, of which 7*l.* 7*s.* 9*d.* per head was for British produce. Notwithstanding this considerable falling-off in the aggregate, there was a large increase in the declared value of many of the articles of British and Irish produce exported in 1874 as compared with 1873, among the most noticeable being—arms and ammunition of various kinds, which had risen from 423,892*l.* to 989,437*l.*; chemical products or preparations, from 1,754,797*l.* to 2,143,049*l.*; steam engines, from 2,972,617*l.* to 3,255,685*l.*; oil seed, from 1,471,071*l.* to 1,529,013*l.*; brass, from 500,720*l.* to 659,975*l.*; lead, from 760,294*l.* to 830,842*l.*; tin, from 786,156*l.* to 810,652*l.*; painters' colours, from 1,012,829*l.* to 1,161,234*l.*; silk manufactures, from 1,878,600*l.* to 2,101,419*l.*; soap, from 243,047*l.* to 277,723*l.*; refined sugar, from 1,045,751*l.* to 1,221,891*l.*: and flannels, blankets, and baizes, from 1,089,864*l.* to 1,318,007*l.* In the majority of the articles the decrease was very considerable: apparel and slops fell from 3,437,410*l.* to 3,200,853*l.*; small firearms, from 515,260*l.* to 377,614*l.*; gunpowder, from 442,170*l.* to 415,716*l.*, a lower amount than it has reached since 1869; printed books, which had steadily increased from 494,845*l.* in 1860 to 913,846*l.* in 1873, fell to 904,792*l.* in 1874; butter fell from 265,585*l.* to 259,331*l.*, a decrease from 637,925 in 1860; candles from 220,776*l.* to 187,777*l.*; coals, cinders, and fuel, from 13,188,511*l.* to 11,984,621*l.*; corn (wheat), from 759,605*l.* to 230,066*l.*; earthen and china ware, from 2,048,872*l.* to 1,738,340*l.*; plate glass, from 328,699*l.* to 215,605*l.*; boots and shoes, from 1,707,886*l.* to 1,374,302*l.*; linen yarn, from 1,976,830*l.* to 1,716,231*l.*; white manufactured linen, from 6,204,800*l.* to 5,876,864*l.*; old iron for re-manufacture, from 392,522*l.* to 245,381*l.*; pig and puddled iron, from 7,118,037*l.* to 3,673,734*l.*; bar iron, from 3,755,980*l.* to 3,054,547*l.*; railroad iron of all sorts, which had risen from 3,408,759*l.* in 1860 to 10,418,852 in 1873, fell to 9,638,236*l.* in 1874; iron hoops, from 3,722,889*l.* to 2,975,409*l.*; copper ingots, from 1,212,612*l.* to 942,420*l.*; salt, from 789,054*l.* to 662,393*l.*; thrown silk, from 1,667,545*l.* to 1,032,643*l.*; British spirits, from 210,964*l.* to 152,468*l.*, the lowest value reached since 1867; telegraphic wire, from 2,359,223*l.* to 2,112,801*l.*; and woollen and worsted manufactures, from 25,349,878*l.* to 22,800,952*l.* In the exports of foreign and colonial produce, on the other hand, there was a considerable increase, the total value having risen from 55,840,162*l.* in 1873 to 58,092,343*l.* in 1874, although it is still below that of 1871, when it reached 60,508,538*l.* The articles in which there is the most noticeable increase in 1874, as compared with 1873, are: chemical manufactures, which rose from 177,996*l.* to 229,923*l.*; raw cotton, from 6,535,154*l.* to 6,833,616*l.*; hides, tanned and untanned, from 1,739,284*l.* to 1,989,240*l.*; copper, unwrought, old, and part wrought, from 1,883,496*l.* to 2,013,611*l.*; unwrought iron, in bars, from 270,143*l.* to 364,667*l.*; opium, from 267,801*l.* to 333,501*l.*; quicksilver, from 394,310*l.* to 652,108*l.*; rice, not in the husk, from 1,925,669*l.* to 2,519,870*l.*; silk manufactures, from 324,603*l.* to 341,673*l.*; pepper, from 379,703*l.* to 461,976*l.*; rum, from 209,158*l.* to 249,304*l.*; Geneva and other foreign and colonial spirits, from 286,593*l.* to 301,335*l.*; tobacco, from 36,404*l.* to 62,529*l.*; sugar, from 45,884*l.* to 212,595*l.*; and wool, from 8,889,925*l.* to 10,245,727*l.* There was a reduction in value in the exports of coffee, from 5,822,333*l.* to 5,233,684*l.*; guano, from 522,745*l.* to 150,199*l.*; hemp, from 255,391*l.* to 210,320*l.*; raw silk, from 3,700,404*l.* to 2,962,796*l.*; and in wine, from 916,580*l.* to 825,273*l.* The total value of the exports of foreign and colonial produce is now more than double what it was in 1860, having risen from 28,000,000*l.* to 58,000,000*l.* sterling.

TRADE AT THE PORTS OF THE KINGDOM.—The Custom-house returns for the port of London, show that in the year 1874 there were 108,899 passengers and 251,494 packages examined on arrival within the port from abroad. This shows 663 fewer passengers than in the preceding year, but 11,024 more packages. Of the passengers 65,893 were examined at Charing Cross and Victoria railway stations, and 34,171 on board steamers coming up the river. The amount of duty collected on sugar in the port of London in 1874, was 600,000*l.* less than in the preceding year, that duty having ceased to be charged during more than two thirds of 1874, but the total receipt in London of Customs duties from all sources in the year shows a diminution of less than 400,000*l.*, proving that the receipts from sources other than sugar increased. Of this increase the excess on tea alone amounted to upwards of

100,000*l*. The gross amount of Customs duties collected in 1874 at the ports of the United Kingdom (without including 647,000*l*. collected by the Inland Revenue Department on Customs goods delivered for home consumption from an Excise warehouse) was 18,893,994*l*., of which amount 9,506,721*l*. was collected in London, 2,966,241*l*. at Liverpool, 3,002,081*l*. in other ports of England, 1,666,215*l*. in Scotland, and 1,752,736*l*. in Ireland At Liverpool, notwithstanding a large increase of receipt on tobacco, the Customs duties show a falling off to the amount of 210,000*l*., owing to the abolition of the sugar duties. There was again, in 1874, a large decrease in the quantity and value of foreign goods brought to this country by ports on the east coast of England and by Southampton for shipment at Liverpool. This transit trade, from which the revenue derives no benefit, has been decreasing more or less year by year since 1870; the cause of the diminution is probably to be found in the increasing importance of the mercantile navy of Germany and other neighbouring countries. The receipt of Customs revenue in 1874, at English outports other than Liverpool, shows a decrease of 269,000*l*.; the decline is very large at Bristol and Hull. At Irish ports the decrease is 132,000*l*.; Cork, Dublin, Belfast, and Londonderry being especially noticeable. In Scotland the decrease is no less than 600,805*l*., being large at Leith and Glasgow, and amounting to no less than 482,875*l*. at Greenock. The repeal of the sugar duties is the cause of these changes. The sugar duties formed the principal source of the Customs revenue of the port of Greenock; and their abolition has made one of the ports, that of Port Glasgow, of so little importance as to admit of its being taken out of the list of independent ports, and included within the limits of the neighbouring port of Greenock. After London and Liverpool, the largest receipts of Customs duties in 1874 were 840,384*l*. at Glasgow, 838,159*l*. at Dublin, and 737,835*l*. at Bristol.

IMPORTS OF MEAT.—Our imports of meat from abroad in 1874 were not so large as in the preceding year. The imports of living animals comprised 119,808 oxen and bulls, 38,013 cows, 36,041 calves, 758,902 sheep and lambs, and 115,389 swine; making a total of 1,068,153 animals. This is less by 64,745 than in the year 1873; the number of swine shows an increase of above 34,000, and the cows were rather more in number than in 1873, but the sheep and lambs imported show a decrease of 92,000, the calves a decrease of 7,000, and there were 1,500 fewer oxen brought here than in the previous year. The import of dead meat in 1874 shows a still larger decrease when compared with that of 1873. There were 2,355,112 cwt. of bacon imported in 1874, 186,569 cwt. of hams, 322,975 cwt. of pork other than hams, mostly salted. This last item shows an increase of 32,524 cwt., but the hams a decrease of 14,000 cwt., and the bacon a decrease of 418,000 cwt. Last year's import of beef, mostly salted, amounted to 266,363 cwt.; meat, salted or fresh, 118,888 cwt.; and meat preserved otherwise than by salting, 265,394 cwt. These three items all show an increase; the second an increase of 39,179 cwt. The import of meat preserved otherwise than by salting, reached 352,023 cwt. in 1872, but in 1873 fell to 261,212 cwt., and in 1874 was, as just stated, 265,394 cwt. The total import of dead meat in 1874, therefore, amounted to 3,515,301 cwt., two-thirds consisting of bacon, and the total being 352,939 cwt. less than in 1873. The 1,068,153 animals imported into the United Kingdom in 1874 were of the declared value of 5,264,566*l*.; the 3,515,301 cwt. of dead meat 8,221,799*l*.; and if we add 271,137 for poultry and game, the year's total import reaches the value of 13,757,502*l*.

COTTON.—A total of 13,989,861 cwt. of raw cotton was imported into the United Kingdom during the past year. Of this 1,839 cwt. came from the northern ports of Russia, 4 cwt. from Sweden, 5,531 cwt. from Germany, and the rest is thus epitomized:—Holland, 6,715 cwt.; Belgium, 6,110 cwt.: France, 12,040 cwt.; Portugal, 795 cwt.; Spain, 2,613 cwt.; Italy, 318 cwt.; Austrian Territories, 5,424 cwt.; Malta, 375 cwt.; European Turkey, 236 cwt.; and Asiatic Turkey, 10,635 cwt.; Egypt, 1,538,549 cwt.; British Possessions on the Gold Coast, 11,315 cwt.; West Africa—Portuguese Possessions, 846 cwt.; and others, 1,276 cwt.; Cape of Good Hope, 19 cwt.; Natal, 532 cwt.; Mauritius, 1,350 cwt.; Aden, 40 cwt.; British India, Bombay, and Scinde, 3,045,248 cwt.; Madras, 582,411 cwt.; Bengal and Burmah, 41,269 cwt.; and Ceylon, 9,867 cwt.; China, 3,561 cwt.; Australia—Victoria, 1,262, New South Wales, 12,014, Queensland, 8,472, and New Zealand, 3,536 cwt.; British North America, Dominion of Canada, 4,949 cwt.; United States of America, on the Atlantic, 7,809,298, and on the Pacific, 2,549 cwt.; British West India Islands, 3,688 cwt.; British Guiana, 801 cwt.; British Honduras, 1,157 cwt.; Spanish West India Islands, 386 cwt.; Dutch West India Islands, 22 cwt.; Danish West India Islands, 1,179 cwt.; Hayti and St. Domingo, 4,783 cwt.; Mexico, 147 cwt.; Central America, 243 cwt.; New Grenada (United States of Columbia), 55,151 cwt.; Venezuela, 1,920 cwt.; Ecuador, 300 cwt.; Peru, 72,197 cwt.; Chili, 7,048 cwt.; Brazil, 709,834, and the Argentine Republic, 7 cwt.

3. TRADE AND AGRICULTURE.

COAL AND CINDERS. — From a return relating to coals, cinders, &c., it appears that in the year 1874 the following quantities of coals, cinders, and patent fuel were shipped at the various ports of England, Scotland, and Ireland coastways, to other ports of the United Kingdom:—Coals, 9,554,802 tons; cinders, 27,247 tons; and patent fuel, 27,175 tons; making a total of 9,609,224 tons. The quantities and declared value of these articles exported from the several ports of the United Kingdom to foreign countries and the British settlements abroad during 1874 were as follows:—Quantities exported: coals, 13,381,071 tons; cinders, 236,240 tons; patent fuel, 309,894 tons; total, 13,927,205 tons. The declared value being: coals, 11,359,458*l.*; cinders, 314,246*l.*; patent fuel, 310,917*l.*; total, 11,984,621*l.* The return also professes to give an account of the rate and amount of duty received on these exports of coals, &c., but inasmuch as the duties on coals and cinders exported were wholly repealed by Act 13 and 14 Vict., c. 95, from August 14, 1850, it can only comply with the order of the House of Commons by reminding that body of the fact that there are now no duties leviable on exported coals. It further appears by this return that during the year 1874 the quantities of coal brought coastways, by inland navigation, and by railway into the Port of London, were—coastways, 2,727,719 tons, and by inland navigation and by railway, 4,704,353 tons, making a total of 7,432,072 tons; while 20,391 tons of patent fuel were also brought coastways to this metropolis. The quantities of coals and patent fuel received coastways at the various ports of the United Kingdom during the past year are stated as follows:—coals, 9,413,812 tons, and patent fuel, 27,587 tons.

RAILWAYS.—It appears from a parliamentary paper just issued that the total number of miles of railway open in the United Kingdom on the 31st December, 1874, was 16,449. The total number of miles travelled by trains was 200,484,263. The total number of passengers conveyed, exclusive of holders of season and periodical tickets, was 477,840,411, and the number of persons who held season or periodical tickets was 493,957. The total authorised capital was 704,338,299*l.* The total working expenditure was 32,612,712*l.*; the total receipts, 59,255,715*l.*; and the net receipts, 26,643,003*l.* The proportion per cent. of expenditure to total receipts was 55.

CORN.—The total decrease in the quantity of wheat imported in 1874, as compared with the preceding year, was 2,383,638 cwts., the figures being 43,863,098 and 41,479,460 for 1873 and 1874 respectively. The value, however, has declined to a considerably greater extent than the quantities, the money represented by the imports of 1873 being 28,538,746*l.*, whilst that of the imports of 1874 is only 25,236,932*l.*, being a decrease in quantity of 5·3 per cent. and in value of 11·5 per cent. The diminution in value would have been still greater but for the circumstance that large quantities were imported at prices contracted for before the effects of the bountiful harvest of 1874 were distinctly realized.

COFFEE.—The importation of coffee diminished from 1,637,523 cwts. in 1873 to 1,404,923 in 1874, or about 14 per cent. The value, however, receded only by about 2 per cent., on the average, from the very high prices of the year 1873. The falling off in Ceylon coffee alone accounts for 308,444 cwts. Central America also shows a decline of 46,182; but to counterbalance in some measure these decreases, there was an augmented receipt of 38,000 cwts. from Bombay. and of 56,376 cwts. from Brazil. The stocks of coffee in the bonded warehouses at the end of the year, however, exceeded those of 1873 by 43,000 cwts., and very nearly equalled those of the preceding year.

TEA.—The quantity of tea imported and warehoused during the year was 162,782,810 lbs. The difference between this and the quantity imported in 1873 viz., 163,765,269 lbs., is almost inappreciable, being a decrease of only about ·6 per cent. on so large a total. These figures, however, do not represent the whole of the tea brought to this country. London as usual received nearly the whole of the tea imported into the United Kingdom, viz., 162,404,000 lbs. out of the total quantity of 162,782,000 lbs., and supplied the rest of the country either in the shape of the duty-paid article or by removal under the Customs' regulations to the bonding warehouses of other ports.

HOPS.—The growth of hops in Great Britain is almost entirely confined to England, and there chiefly to special localities. The cultivation of this plant does not vary very largely from year to year, although affected to some extent by fluctuations of price. Nearly 66,000 acres were returned as planted with hops in England in 1874, the largest acreage in recent years. It was 2,500 acres more than in 1873 nearly 6,000 above the low total for 1871, and 1,500 in excess of the total for 1868, the highest until 1874 under the present returns. Hop planting rather declines than otherwise in counties where it is practised upon only a small scale.

AGRICULTURE OF THE UNITED KINGDOM.—The following Return shows the Acreage under each Crop, and Fallow, and Grass, and Number of Live Stock, in Great Britain and Ireland upon 25th of June in every second year from 1868 to 1874:—

DESCRIPTION of CROPS and LIVE STOCK.	UNITED KINGDOM, including the Isle of Man and Channel Islands.			
	1868.	1870.	1872.	1874.
CORN CROPS.	Acres.	Acres.	Acres.	Acres.
Wheat	3,951,018	3,773,663	3,839,532	3,830,767
Barley or Bere	2,348,068	2,623,752	2,543,581	2,507,130
Oats	4,469,387	4,424,536	4,340,748	4,088,825
Rye	54,827	74,527	75,849	56,274
Beans	538,943	539,968	334,341	568,984
Peas	297,612	318,607	364,194	312,854
Total	11,659,855	11,755,053	11,698,245	11,364,834
GREEN CROPS.				
Potatoes	1,584,213	1,639,296	1,563,691	1,420,825
Turnips and Swedes	2,495,536	2,559,629	2,439,336	2,476,757
Mangold	268,780	332,409	364,699	361,499
Carrots	17,815	19,925	20,977	17,865
Cabbage, Kohl-Rabi, and Rape	157,525	189,344	228,118	210,578
Vetches, Lucerne, and any other Crop (except Clover or Grass)	341,188	366,532	495,173	470,159
Total	4,865,057	5,107,135	5,111,994	4,957,683
OTHER CROPS, GRASS, &c.				
Flax	224,034	218,870	137,360	116,280
Hops	64,488	60,597	61,927	65,806
Bare Fallow or Uncropped Arable Land	984,246	630,294	667,299	673,376
Clover Sanfoin, and Grasses under Rotation.. For Hay	Not ascertained.			
Clover Sanfoin, and Grasses under Rotation.. Not for Hay				
Total	5,690,318	6,320,126	6,354,319	6,284,925
Permanent Pasture (exclusive of Heath or Mountain Land) .. For Hay	Not ascertained.			
Permanent Pasture (exclusive of Heath or Mountain Land) .. Not for Hay				
Total	22,164,584	22,085,295	22,838,178	23,680,416
ORCHARDS: Arable or Grass Land used also for Fruit Trees	Not ascertained.			
MARKET GARDENS				
NURSERY GARDENS: for growing Trees, Shrubs, &c.				
Woods, Coppices, and Plantations	Not ascertained	Not ascertained.	2,512,251	2,512,251
LIVE STOCK.	No.	No.	No.	No.
Horses: used solely for Agriculture, Mares kept solely for breeding, and unbroken Horses	—	1,750,498	1,747,899	1,789,467
Other kinds (subject to Licence Duty in Great Britain)	—	880,808	967,408	972,681
Cattle	9,083,416	9,235,052	9,718,505	10,281,036
Sheep	35,607,812	32,786,783	32,246,642	34,837,597
Pigs, exclusive of those kept in Towns and by Cottagers	3,189,167	3,650,730	4,178,000	3,537,354

Wine.—There was in 1874 a diminished importation of wine for the first time during a period of ten years. The total quantity imported was 18¼ million gallons, and the quantity brought in 1873 nearly 21¾ million, showing a decrease of about 16 per cent. The decrease in sherry was no less than 24·6 per cent. Wine from Portugal exhibited a decline of 7 per cent., and French wine of all sorts 18·2 per cent. (of these the red had decreased 19·6, and the white 14·8 per cent.) Dividing the quantity in the proportions of red and white, the following is the result:—

	1873.	1874.
	Gallons.	Gallons.
Red	10,049,255	8,987,078
White ..	11,633,101	9,247,894

showing that the red wine has fallen off to the extent of 10·5, and the white to the extent of 20 per cent.

Live Stock.—The returns of the different descriptions of live stock in the United Kingdom in 1874 show the following results:—For horses, as far as returned, a total of 1,847,000. If to this number be added 865,000, the estimated number subject to the licence duty in 1873, and 50,000 for horses not otherwise enumerated (including those belonging to the army at home), the total number of horses in the United Kingdom would probably amount to 2,762,000, of which about 2,227,000 would be in Great Britain, 526,000 in Ireland, and 9,000 in the Islands. The total number of cattle was 10,281,000, of which Great Britain had 6,125,000, Ireland 4,118,000, and the Islands 38,000. The total number of sheep amounted to 34,837,000, of which 30,314,000 were in Great Britain, 4,437,000 were in Ireland, and 86,000 in the Islands. The total number of pigs returned was 3,537,000: Great Britain having 2,423,000, Ireland 1,096,000, and the Islands 18,000. There were not so many pigs kept in Great Britain in 1874 by 78,300 as in 1873, and by 349,000 as in 1872. Dearness of feeding stuffs prevailed both in 1874 and 1873, and disease also reduced the numbers in 1873. The greater preference for and use of butcher's meat amongst the labouring classes are causing a smaller demand for pork. In Ireland, although the number of pigs was larger by 52,000 in 1874, the stock was probably checked by the higher prices of food. The table with the number of live stock in the United Kingdom and Foreign Countries affords a comparison of the relative national supplies of horses cattle, sheep, and pigs. According to these returns, Russia possesses the surprisingly large number of 16,160,000 horses. The United States returns as many as 9,333,000, but in the countries which stand next in the number of horses, the United Kingdom, France, and Germany (Prussia, Bavaria, and Wurtemburg), the number is not very different, and is below 3,000,000. Of cattle, about 27,000,000 are returned for the United States, 23,000,000 for Russia; and the United Kingdom, France, and Germany (Prussia, Bavaria, and Wurtemburg), come next with from about 10,000,000 to 12,000,000 in each country. In the number of sheep, Russia takes the lead with 48,000,000, the United Kingdom is next with 35,000,000, then the United States with 34,000,000, France with 24,000,000, and Germany (Prussia, Bavaria, and Wurtemburg) with about 22,000,000, the number also given for Spain.

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4. POPULATION, PUBLIC EMPLOYMENT, AND VITAL STATISTICS.

Vaccination in Ireland.—The Commissioners of the Irish Local Government Board, in their annual report, observe that four-fifths of the deaths from small-pox in Ireland are of children under five years of age. They therefore express dissatisfaction at finding "a continuous decline in the number of infants vaccinated each year, from 109,722 in 1872 to 100 061 in 1873, and to 96,850 last year." There is some increase with respect to the older children vaccinated; but it is far from compensating the falling off from the younger cases. There would be no excuse for this negligence if the disease was never more rife than in the four years ended with 1870, when the average number of deaths was 23 a-year: but when the numbers rose as they did in 1871 to 647, to be followed in 1872 by 3,197 deaths—there were 10,317 cases of small-pox in the Irish workhouses alone in the year ended September, 1872—one is struck, if not much surprised, by the apathy of the people. In 1873 there was a great decline in the small-pox death-rate; then 481 only fell victims to the malady; it rose again in 1874, the return before us marking 540 deaths. The Commissioners are of opinion "that this increase of deaths from small-pox is to be attributed to a resuscitation of the disease in the northern and north-western counties, probably owing to importation from Scotland." Professional inoculators, who had ceased for some time to be heard of, have reappeared. They have, the report states, sensibly contributed to the spread of the disease. "By means of the concert between the inoculators and the peasantry, the police, though

very active in their endeavours to convict the operators, have not succeeded in more than one case."

BIRTHS, MARRIAGES, AND DEATHS.—The following table shows the total number of births, deaths, and marriages in England and Wales, and Scotland, from 1859 to 1874, and Ireland, from 1865 to 1874:—

ENGLAND AND WALES.

Years.	Births.	Deaths.	Marriages.
1859	689,881	441,790	167,723
1860	684,048	422,721	170,156
1861	696,406	435,114	163,706
1862	712,684	436,573	163,830
1863	727,417	473,837	173,510
1864	740,275	495,531	180,387
1865	748,069	490,909	185,474
1866	753,870	500,689	187,776
1867	768,349	471,073	179,154
1868	786,858	480,622	176,962
1869	773,381	494,828	176,970
1870	792,787	515,329	181,655
1871	797,428	514,879	190,112
1872	825,907	492,265	202,267
1873	831,809	494,003	205,460
1874	854,307	526,701	201,605

SCOTLAND.

1859	106,543	61,714	21,201
1860	105,629	68,170	21,225
1861	107,036	62,287	20,828
1862	107,138	67,159	20,544
1863	109,325	71,421	22,087
1864	112,445	74,303	22,675
1865	113,126	70,821	23,577
1866	113,639	71,273	23,629
1867	114,115	69,024	22,521
1868	115,673	69,386	21,853
1869	113,395	75,789	22,083
1870	115,423	74,067	23,788
1871	116,127	74,644	23,966
1872	118,873	75,741	25,580
1873	119,738	76,857	26,730
1874	123,795	80,676	26,247

IRELAND.*

1865	144,970	93,154	30,802
1866	146,237	93,598	30,151
1867	144,318	93,911	29,796
1868	146,108	86,803	27,753
1869	145,659	89,573	27,277
1870	150,151	90,695	28,835
1871	151,665	88,720	28,960
1872	149,292	97,577	27,114
1873	144,592	97,840	26,566
1874	144,411	92,352	25,201

* Owing to the defective state of the Registration, the figures for births, deaths, and marriages in Ireland are only an approximation to the real numbers.

VACCINATION IN SCOTLAND.—The returns annually made in Scotland under the Vaccination Act are now completed for ten years. The last return relates to the children born in 1873. The Act is not compulsory until six months after birth—a long period to allow; and it appears that 10,527 of these children died within the six months, some of them probably from small-pox. There remained 109,283, as to whom we learn that a certain number were removed and were lost sight of by the registrars, and that some children were pronounced insusceptible of vaccination, 39 from having already had small-pox. Dr. W. Robertson, who makes these reports, is able to state that the successful vaccination of 96·243 per cent. is known to have been secured, but he sees reason to fear that 2·4 per cent. did not receive that protection. This proportion is small, and has not materially varied during the ten years, but he thinks it might be lessened by reducing to four months the statutory period during which vaccination may be postponed. It is estimated that the detailed returns of deaths from various diseases will show about 900 deaths from small-pox in Scotland in 1873. Since 1871 an epidemic of small-pox has prevailed in Scotland, but it has been greatly declining for the last two years. Dr. Robertson observes that if any ask why there are epidemics of small-pox now he has to state that in the ten years 1864-73, under the Vaccination Act, 26,000 of the children born in Scotland are believed to have escaped the provisions of the Act, and that there are thousands of the people unvaccinated who were born before the Act came into operation, and also unvaccinated immigrants. It would be irrational to undervalue vaccination because it has not hitherto rendered impossible the accumulation of material for the spread of small-pox. It is clear that the Act has conferred vast benefit upon Scotland. In every 100 deaths from small-pox 60 to 70 used to occur among children under five years of age. The returns for the eight principal towns, already completed for 1874, show that only 25 per cent. of the year's deaths from small-pox occurred among children. It is believed that by the slight amendment above alluded to the protection afforded to children may be materially increased.

MINERS.—From the reports of Her Majesty's inspectors of mines for 1874, for the twelve districts under the Coal Mines Regulation Act, it appears that in the aggregate 538,829 persons were employed in and about the coal, fireclay, ironstone, and shale mines of Great Britain and Ireland, exclusive of those employed in and about mines which are classed under the Metalliferous Mines Regulation Act. The total of persons employed shows that 428,611 were underground, and 110,218 above ground. In regard to the mining produce it appears that in the aggregate 126,590,108 tons of

coal, 2,067,791 tons of fireclay, 11,693,186 tons of ironstone, and 362,747 tons of shale (principally oil shale) were produced from the mines of Great Britain and Ireland. In South Staffordshire 273 tons of iron pyrites were picked from the coal, and in West Lancashire 8 tons. The statistics for the districts under the Metalliferous Mines Regulation Act relate to the year 1873, from which it appears that in the aggregate 62,306 persons were employed in and about the mines of Great Britain and Ireland under this Act, exclusive of those employed at the mines which are classed under the Coal Mines Regulation Act. The total of persons employed shows that in Great Britain 35,283 were underground, and 23,700 above ground, and in Ireland 1,855 underground, and 1,468 above ground.

THE INDIAN ARMY.—The finance accounts of India for the year 1873-4, recently issued, give the following statement of the established strength of the army of India, exclusive of native artificers and followers:—European Army, 66,406—namely, 6,162 officers and 60,254 non-commissioned officers and privates; Native Army, 123,858—namely, 180 officers and 123,678 non-commissioned officers and privates, 208 of this last number being Europeans. The total is 190,264—namely, 6,342 officers and 183,922 non-commissioned officers and privates. The Native Army is described as constituted thus:—796 artillery, 166 body guard, 18,435 cavalry, 3,219 sappers and miners, and 101,242 infantry.

POPULATION OF GREAT TOWNS IN 1875.—The Registrar-General makes the following estimate of the population of the great towns in the middle of the year 1875, calculated on the assumption that the present rate of increase is the same as that which the Census shows to have prevailed in the ten years 1861-71:—London (the "registration division") 3,445,160; Glasgow, 534,564; Liverpool, 516,063; Manchester, 356,626, and Salford, 135,720, making together 492,346; Birmingham, 366,325; Dublin, 314,666; Leeds, 285,118; Sheffield, 267,881; Edinburgh, 211,626; Bristol, 196,186; Bradford, 168,305; Newcastle-upon-Tyne, 137,665; Hull, 133,932; Portsmouth, 122,632; Brighton, 111,089; Leicester, 109,830; Sunderland, 106,342; Nottingham, 92,251; Oldham, 87 437; Norwich, 82,842; Wolverhampton, 71,718.

A RELIGIOUS CENSUS IN IRELAND.—Although the Census of 1871, in England, took no note of the religious denominations which exist, the Irish Census included authentic returns of the various religious bodies in that country. The Roman Catholics head the list with 4,150,000 members, the Protestant Episcopal Church claims 668,000, the Presbyterians number 497,000, and the Methodists 43,000. These four religious denominations embrace about nine-tenths of the entire population, which stands at 5,412,377. Among the "other religious bodies" which make up the balance of this total figure 1,538 Covenanters, are 2,600 Brethren and Christian Brethren, of whom, strange to say, the majority are women; 40 non-sectarians, 44 "Christian Israelites," 33 Mormons, 10 Latter Day Saints, 6 Exclusive Brethren, 5 Humanitarians, 10 Darbyites, 9 Puseyites, 6 Walkerites, 5 Christadelphians, 5 Morrisonians, 60 Free Thinkers, 8 Secularists, 16 Deists, 6 Theists, and 1 Atheist. There is 1 disciple of Positiveism, 1 Buddhist, 1 Mussulman, 1 Confucian, and 1 Pagan; four men and one woman are set down as "undetermined" or "undecided;" and there is a residuum of about 1,050 men and women whose form of religion is "unspecified."

FACTORIES.—It appears from the last annual reports of the Government Inspectors of Factories that there are now 6,710 factories of cotton, flax, silk, wool, and worsted as compared with 4,000 in 1850—a large increase. Again, there has been an increase of over 20,000,000 spinning spindles, and of over 360,000 power-looms during the same period. The effect of legislation is also seen in the diminution of the number of boys employed. In 1850 the number of children employed in cotton factories was 10·3 per cent. of the whole number of employés, this year it is 8 per cent. But the number of children employed in all factories of the above kinds is on the increase. In 1850 there were about 40,000, there are now in round numbers 125,000. It is very evident from the reports that a considerable part of the labour in the factories of this country is performed by women and children. "Evidence has been given again and again," says one of the inspectors, "of the unhappy consequences to child life and infant development of the working of the mothers in factories." And another inspector remarks, with respect to the breach of the Workshop Acts, "After all, this overtime work by milliners' girls, which is so great an evil to the constitutions of the workers, and, I doubt not, so great a cause of immorality amongst them, and the forerunner of so much disease, remains more with the public than with the department."

THE OCCUPATIONS OF THE SCOTCH.—The classification of the occupations of the people adopted by the compilers of the Scotch Census, differs materially from that of the English Census; and the Report presents many results not shown or attainable in the returns of any other country. Of the total population of Scotland at the time of the census, viz., 3,360 018, 1,468,585, or nearly forty-four in every hundred were in some active employment. The proportion of males thus engaged to the total males in the country being sixty-one in every hundred, and the proportion of women and girls to the total females nearly

twenty-eight in every hundred. These women, however, are independent of those who, as wives, sisters, and daughters, returned as dependents and simply refer to actual bread-winners. Of the total workers more than one-half or 51 per cent. were in various forms of manufacture; more than a fifth, or 18 per cent., in agriculture; one-tenth or nearly 11 per cent. in domestic work; one-twelfth or 8 per cent. in indefinite modes of employment; about the same proportion in commercial business, and only 3·69 per cent. in the professions. As compared with the year 1861, these figures show that a considerable change has taken place in the occupations of the Scottish people. An enormous decrease from 25 to 18 per cent. of the total workers has taken place in the agricultural class; and this has been followed by a rise in the commercial and manufacturing classes equal to about 5 per cent. in the latter, and about 2 per cent. in the former; and there has been a slight fractional increase in all the other classes, the agricultural alone showing a diminution. The professional class had increased during the ten years by 2567 persons. In the domestic, or what may be termed the servants' class, the increase was so slight as only to be equal to the natural rise in proportion to the growth of the population. In the commercial class the actual increase in the ten years was 31,773 persons, or 38·3 per cent. The majority of these persons, 28,587 males and 1,295 females were engaged in mercantile pursuits; 5,463 males and 7,067 females, were general dealers or hawkers; 1,1773 males and 27 females were railway servants; 20,783 male and 348 females were carriers on roads; and 11,895 males and 1469 females were employed as messengers or porters. Of the greatly reduced number of agriculturists, whose strength had fallen to the large extent of 102,239 persons, the majority were engaged in fields and pastures, although another large section, included under this head, is that of persons employed in fisheries, who numbered 26,285 males and 1,029 females. It was, however, in the manufacturing class that the greatest numerical increase was noticeable, the rise in the number of persons thus employed in 1871, as compared with 1861, being 46,867 persons. Among the chief occupations in this class are the coal and mineral mines, which furnished employment to 61,446 males and 375 females; the workers in houses and buildings numbering 81,784 males and 315 females; the cotton manufacturers, of whom 19,730 were males and 35,539 females; the workers and dealers in flax and linen including 15,384 males and 27,210 females; and the workers and dealers in wool and worsted, of whom 18,402 were males and 23,815 females. In the last or indefinite class we find upwards of 46,000 general labourers more than 14,000 persons of various occupations; a little more than 12,000 males and 25,000 females of independent means; and more than 3,600 males and 18,000 females of no stated occuparion. One of the most general of the local Scottish industries is the wool manufacture, which is carried on in every county; but in the northern insular counties, Shetland and Orkney, the work, it is stated, consists almost wholly of the knitted goods, known as Shetland hosiery. Thus of the 3,177 women returned as workers or dealers in wool in Shetland, 2,974 were knitters. In Ayrshire there is an extensive manufacture of woollen bonnets; half the 6,400 persons engaged in working in wool in this county being employed in this special branch of the industry. A calculation of great interest was thus made in the Scottish tables, showing the number of persons dependent for their means of subsistence upon every hundred workers or bread-winners. The largest proportion is in the agricultural class, where there are 177 dependents to the hundred workers; in the commercial the number is 147, in the manufacturing 122. The general average is 126 dependents to every hundred of the workers in the entire population, and this, of course, is exclusive of persons maintained from the rates or by charitable funds. In some occupations, as for instance in the workers in textile fabrics, the proportion is far lower, falling in the class just named to 75 to the hundred workers, a natural result of the tendency to employ young hands directly they are able to assist in the factories.

5. CRIME, PAUPERISM, AND ACCIDENTS.

CONVICTIONS OF SEAMEN.—A parliamentary return gives a list of all convictions of seamen in the United Kingdom in the years 1870 to 1873 inclusive for refusing to proceed to sea. It appears from the summary tables at the end of the return that the total number of convictions was 2,287. The number of ships complained of as unseaworthy by the men convicted was 107. Of these 84 made the voyage in safety. With regard to 10 of the ships the results of their voyages are not known. Of the remainder, two foundered at sea, two were abandoned, six were stranded, one was burned, and in two cases the voyage was abandoned. Of the 84 ships which made the voyage in safety, one put into Valparaiso leaky, one was abandoned, and three were stranded on subsequent voyages. Ninety-three of the men convicted gave drunkenness as the reason of their refusal to proceed to sea; 232 gave other reasons, and 595 gave no reasons at all.

Soldiers' Families Chargeable to the Poor Rate.—The following is a return of the number of wives and children of soldiers, marines, and militiamen who received Poor Relief some time during the year 1874, in Great Britain.

	Soldiers.		Marines.		Militiamen.		Total Wives & Children.
	Wives.	Children.	Wives.	Children.	Wives.	Children.	
England	615	1,205	145	469	837	2,471	5,742
Wales	14	36	14	30	14	50	158
Total of England and Wales	629	1,241	159	499	851	2,521	5,900
Scotland	77	146	8	20	22	65	338
Total of Great Britain.	706	1,387	167	519	873	2,586	6,238

Smuggling.—The following is a statement showing the quantity of tobacco and cigars, and of spirits, seized in the United Kingdom in the years 1873 and 1874 respectively:—

	Tobacco and Cigars.				Spirits.			
	1873.	1874.	Increase.	Decrease.	1873.	1874.	Increase.	Decrease.
	Lbs.	Lbs.	Lbs.	Lbs.	Galls.	Galls.	Galls.	Galls.
London ..	3,079	3,712	663	—	106	50	—	56
Outports ..	16,184	7,026	—	9,158	256	216	—	40
Total ..	19,263	10,738	Decrease 8,525		362	266	—	96

The following statement shows the number of seizures and convictions made in the United Kingdom in the years 1873 and 1874 respectively:—

	1873.	1874.	Increase.	Decrease.
Number of seizures	1,210	1,157	—	53
Number of persons convicted ..	1,174	1,094	—	80

Sentenced to be Flogged.—A Parliamentary return has been issued which shows that since the year 1862 there have been 2,806 persons convicted in England (at the Assizes and Central Criminal Court) of offences which, under the Act of 26 and 27 Vict., are punishable by flogging, and that 339 were sentenced to be flogged. Of the whole 339 there were 127 who were so sentenced at the Central Criminal Court; 79 on the Midland Circuit, 59 of them being sentenced at Leeds within the last ten years, besides 15 in other parts of Yorkshire. There were also 53 so sentenced (to be flogged) in the County Palatine of Lancaster, 33 at Manchester, and 20 at Liverpool.

Pauper Children.—A parliamentary return obtained by Lord de la Warr shows that the total number of orphan and deserted pauper children boarded out in different unions in England and Wales on the 1st of July, 1874, under the regulations of the Local Government Board, was 218, and that the total number of children placed out within the union, but not under the regulations of the Local Government Board, was 2,546, giving a grand total of 2,764. The average cost per week of each of these children to the ratepayers in the several unions, exclusive of the Central London and North Surrey district schools, was 2*s.* 8*d.* The average cost per week of each child in the Central London and North Surrey District Schools was 10*s.* 1½*d.* The average cost per week of a pauper maintained in a workhouse in the metropolis is 4*s.* 9½*d.*, and in other unions in England and Wales 4*s.* 3¼*d.*

The Pauper Roll.—The annual return of pauperism in England on the 1st of January, 1875, shows that the number of

persons in receipt of relief rates on that day was 817,822, being less by 14,548, or 1·7 per cent., than on the corresponding day in the preceding year. The in-door paupers do not vary much in number; they were 156,795 on the 1st of January, 1872, 154,171 at the like date in 1873, 152,279 in 1874, 155,655 in 1875. But the number of out-door paupers is lessening; they were 662,167 on the 1st of January, 1875, which is 17,924 less than at the corresponding date in 1874, 74,034 less than in 1873, and 162,080 less than in 1872. The paupers on New Year's day, 1875, were 1 in 28, or 3·6 per cent. on the population according to the census of 1871; but as the population has increased since then, the real ratio was not quite so large as that. The number of adult able-bodied paupers (three-fourths of them being women) was 115,209 on the 1st of January, 1875; this was 885 more than at the corresponding date in 1874, but less by 12,488 than in 1873, and by 38,544 than in 1872.

London Fire Brigade.—Eight years have now elapsed since, in the summer of 1867, the protection of life from fire was undertaken by the Metropolitan Board of Works. Before that date it was in the hands of a society constituted for the purpose, and when the society's machinery and plant were handed over to the Board, in 1867, the number of fire-escapes was 85; at the close of last year there were 129. The Fire Brigade came under the control of the Metropolitan Board of Works in the preceding year—1866. The number of officers and men of the brigade was 130 on the 1st of January, 1866; it had increased to 396 nine years afterwards, at the end of the year 1874. The engine stations increased, in the same period, from 17 to 49; the river stations (with floating engines), from two to four; the land steam engines, from 9 to 26; the manual engines, from 27 to 85. The maintenance of this great establishment cost nearly 76,000*l.* last year. The Treasury contributed 10,000*l.*, the Insurance Companies above 17,000*l.*; nearly 43,000*l.* was raised in precepts, and there were a few incidental receipts.

Accidents in Mines.—It appears from the reports of Her Majesty's Inspectors of Mines for the year 1874, that at the mines classed under the Coal Mines Regulation Act, in Great Britain and Ireland, the fatal accidents amounted to 895, and the deaths (some of the accidents causing more than one death) amounted to 1,056. From a summary, showing the proportion which the accidents and deaths bear to the persons employed and minerals raised, it appears that on the average in 1874, in Great Britain and Ireland (no accidents or deaths in Ireland), there was at all the mines under the Coal Mines Act one fatal accident amongst every 602 persons employed in and about the mines, and one death by accident amongst every 510 persons employed; also that 157,222 tons of mineral were got for each fatal accident, and 133,251 tons for each death by accident. In the preceding year (1873) the fatal accidents and deaths in proportion to the number of persons employed were more numerous, showing one accident and one death respectively among the lesser numbers of 526 and 479, while, in proportion to the tons of minerals raised, the corresponding figures (1873) showed one accident and one death for the quantities of 146,867 tons and 133,677 tons respectively, showing an increase of production per fatal accident of over 10,000 tons, but a small decrease in production per life lost. In the year 1874, at the mines classed under the Metalliferous Mines Regulation Act, in Great Britain and Ireland, the fatal accidents amounted to 94, and the deaths (some of the accidents causing more than one death) to 103. Of these, 89 deaths occurred underground, and 14 above ground. As the Metalliferous Mines Regulation Act does not make it imperative on mine owners and mine agents to make returns of the persons employed and the quantities of mining produce raised during the year ending the 31st of December until the 1st of August following, the summaries formed from them this year are for the year 1873, but the lists of accidents and deaths are for the year 1874. Comparing the accidents of 1874 with the number of persons employed in 1873, the ratio is one fatal accident for every 663 persons, and one death in every 604 employed in and about the mines; and, distinguishing between the underground and surface workers, the ratio is one death in 417 underground, and one in 1,797 among the surface hands.

The Wreck Register.—In presenting to Parliament the Wreck Register and Chart for the year 1873-4, the Board of Trade observe that it has been found advisable to make up its tables from the 1st of July to the 30th of June, instead of from the 1st of January to the 31st of December, as was formerly the case. The wrecks and casualties treated of in the various tables do not mean total losses only, but include accidents and damage of all kinds to ships at sea, of which only a very small proportion are attended with loss of life. Thus, of the 1,803 wrecks, casualties, and collisions on the coasts of the United Kingdom in the year 1873-4 (401 less than the number reported during the year 1872-3), 408 involved total loss, and only 130 were attended with loss of life. The total number of wrecks in 20 years is 31,168, representing the actual loss of 14,457 lives. It appears that about one out of 14 of the casualties in 1873-4 resulted in loss of life. The number of ships lost or damaged in the 1,803 wrecks, casualties, and collisions was 2,191. The number of ships in 1873-4 is less than the number in 1872-3 by 501. The number of ships reported is, as has

been formerly stated, in excess of the number of casualties reported, because in cases of collision two or more ships are involved in one casualty. Of the total number of wrecks, 381 were collisions, and 1,422 were wrecks and casualties other than collisions. Of these 1,422 wrecks, strandings, and casualties other than collisions, 346 were wrecks, &c., resulting in total loss, and 1,076 were casualties resulting in partial damage, more or less serious. The whole number of wrecks and casualties other than collisions on and near our coasts reported during the year 1872-3 was 1,732, or 310 more than during the year 1873-4. Of the 346 total losses from causes other than collisions, 128 are classed in the returns as having been caused by stress of weather; 93 appear to have been caused by inattention, carelessness, or neglect; 30 arose from defects in the ships or in their equipment (and of these 30, 19 appear to have foundered from unseaworthiness); and the remainder appear to have arisen from various other causes. Of the 1,076 casualties—*i.e.*, cases of partial damage from causes other than collisions, 525 were caused by stress of weather; 180 arose from carelessness; 91 from defects in the ship or her equipments; and the remainder appear to have arisen from various other causes. The total number of ships which foundered or were otherwise totally lost from defects in the ships or their equipments during the year 1873-4 is 30; and the number of casualties arising from the same causes during the same year, and resulting in partial damage, is 91. In 1873-4 there were 165 wrecks and casualties to smacks and other fishing vessels. Excluding these, the number of vessels employed in the regular carrying trade which suffered from wreck or casualty during the year was 2,026. The life lost during the year 1873-4 in the various wrecks was as follows:—In fishing vessels, 76; in vessels of the collier class, 195; and in other ships, 235. Of the 2,191 vessels lost or damaged during the year 1873-4, 270 were steamships, 92 were rigged as ships, 609 schooners, 216 brigs, 288 barks, 212 brigantines, and 151 smacks; the remainder were small vessels rigged in various ways. Of the 2,191 vessels referred to, 1,022 did not exceed 100 tons burden, 660 were from 100 to 300 tons, 323 were from 300 to 600 tons, and 186 only were above 600 tons burden. Of the 270 steamships 226 are known to have been built of iron; and of the 1,921 sailing vessels, 42 are known to have been built of iron, and 8 to have been composite vessels. It is a remarkable fact that, while the greatest number of wrecks happened on the east coast, the largest loss of life occurred in the Irish Sea. It appears that the winds which have been most destructive to shipping on and near the coasts of the United Kingdom have been from the west, winds from this quarter being much more frequent than those from the east. 1,002 wrecks happened when the force of the wind did not exceed a strong breeze; 314 happened when a ship, if properly found, manned, and navigated, can keep the sea with safety; 423 happened with the wind at from a strong gale to a hurricane. As regards the loss of life, the returns show that the number of lives lost from wrecks, casualties, and collisions, on or near the coasts of the United Kingdom, during the year 1874-3, is 506. This is 222 less than the number lost in the six months ending June 1873. The lives were lost in 130 ships; 87 of them were laden vessels, 40 were vessels in ballast, and in three cases it is not known whether the vessels were laden or light. Ninety-five of these ships were entirely lost, and 35 sustained partial damage. Of the 506 lives lost, 61 were lost in vessels that foundered, 76 through vessels in collision, 200 in vessels stranded or cast ashore, and 101 in missing vessels. The remaining number of lives lost (68) were lost from various causes, such as through being washed overboard in heavy seas, explosions, &c. Nine of these lives were lost in wrecks or casualties which, although they happened before July, 1873, are included in these Returns, the reports having been received too late for them to be included in the Returns for the first six months of 1873. The 293 lost through the sinking of the Northfleet will account for the number lost during the first six months of 1873 so far exceeding the number lost during the whole year 1873-4. The means for saving life from shipwrecks on our coasts are now most efficient. The Board of Trade, at an expense of about 8,500*l.* a year, taken from the Mercantile Marine Fund, contributed annually in the shape of dues by shipowners, maintains at different Coastguard stations 289 rocket and mortar apparatus, which were last year instrumental in saving 175 lives from various wrecks. Much daring and skill are often exhibited by the officers and men of the Coastguard and Volunteer Life Brigades in working successfully the rocket apparatus. Shore and ships' boats also nobly did their part last winter in saving life from wrecks. Foremost, however, among the means for saving life on the coasts of the United Kingdom must be classed the 250 lifeboats belonging to the National Lifeboat Institution, and which contributed last year to the saving of 713 lives from various shipwrecks.

6. EDUCATION, SCIENCE, AND ART.

Progress of Education in Great Britain.—The following table exhibits the progress of education in Great Britain in schools under Government inspection from 1859 to 1874, distinguishing England and Wales, from Scotland:

Years ended 31st August.	Number of Schools Inspected.	Number of Children who can be Accommodated.	Average number of Children in Attendance.	Number of Children present at Inspection.
	England and Wales (including Isle of Man and Roman Catholic Schools for Great Britain).			
1859	5,531	1,054,813	674,602	757,082
1864	6,470	1,332,553	862,817	983,928
1869	8,592	1,838,416	1,153,572	1,448,299
1874	13,243	2,982,981	1,774,173	2,146,990
	Scotland (exclusive of Roman Catholic Schools, included above).			
1859	1,055	154,228	126,799	123,049
1864	1,421	188,904	148,317	149,363
1869	1,745	237,928	179,214	191,203
1874	2,529	372,776	265,641	302,262
	Total for Great Britain.			
1859	6,586	1,209,041	801,401	880,131
1864	7,891	1,521,457	1,011,134	1,133,291
1869	10,337	2,076,344	1,332,786	1,639,502
1874	15,772	3,355,757	2,039,784	2,449,252

The Education Vote of 1874.—In the financial year ending the 31st of March, 1874, the expenditure in England from the parliamentary grant for elementary education amounted to 1,268,773*l.*, which was applied as follows:—784,228*l.* was granted to schools connected with the Church of England; 157,056*l.* to schools connected with the British and Foreign School Society; 77,222*l.* to Wesleyan schools; 64,713*l.* to Roman Catholic schools; 52 319*l.* to Board schools; 120*l.* to parochial Union schools; 208*l.* to School Boards under the Act of 1870; and 18,579*l.* for organization of districts under that Act. The remaining 114,328*l.* is the cost of the administration and inspection.

Annual Parliamentary Grants for Education in England from 1833 to 1875.

1833—1838	£20,000	1861 . .	£803,794
1839—1841	30,000	1862 . .	842,119
1842—1844	40,000	1863 . .	804,002
1845 . .	75,000	1864 . .	705,404
1846—1850	115,000	1865 . .	693,078
1851 . .	150,000	1866 . .	694,530
1852 . .	160,000	1867 . .	705,865
1853 . .	260,000	1868 . .	781,324
1854 . .	263,000	1869 . .	840,711
1855 . .	396,921	1870 . .	914,721
1856 . .	451,213	1871 . .	1,458,402
1857 . .	541,233	1872 . .	1,551,560
1858 . .	663,435	1873 . .	1,299,803
1859 . .	836,920	1874 . .	1,356,852
1860 . .	798,167	1875 . .	1,548,563

Cost of Board School Buildings.—From a parliamentary return which has just been issued, we gather that the following sums respectively represent the estimated cost of board school buildings for each child (including sites) in the places named:—London, 15*l.* 7*s.* 2½*d.*; Liverpool, 12*l.* 10*s.* 0½d.; Manchester, 13*l.* 2*s.* 1½*d.*; Birmingham, 11*l.* 9*s.* 11¼*d.*; Bristol, 7*l.* 15*s.* 0¾*d.*; Newcastle, 12*l.* 13*s.* 2½*d.*; Sheffield, 9*l.* 14*s.* 2½*d.*; Leeds, 11*l.* 0*s.* 11½*d.*; Brighton, 12*l.* 3*s.* 8¾*d.*; Bradford, 22*l.* 14*s.*; Huddersfield, 12*l.* 16*s.*; Leicester, 9*l.* 19*s.* 0¾*d.*; Halifax, 11*l.* 16*s.* 0¾*d.*; and Nottingham, 9*l.* 12*s.* 10*d.* In London and Bradford the purchase of sites increased the cost per child by about 5*l.*; in the other towns the additional expense averages 2*l.* 3*s.* per head. Up to the 30th April last the number of board schools for which loans from the Public Works Loan Commissioners had been sanctioned was 941; and the total amount so expended on school buildings in board districts to the same date is 4,021,418*l.* The total annual expenditure of the boards had increased from 279,672*l.* in 1872 to 1,958,056*l.* in 1874; while in the same period the accommodation in their schools rose from 17,156 to 245,508. The average attendance for the year ending the 31st of August last was 57 per cent. of the room provided.

Endowed Schools in Scotland.—It appears from the third report of the Endowed Schools (Scotland) Commission that the total amount of educational endowments in Scotland is 174,532*l.* The Hospital endowments amount to 79,245*l.*, of which sum 58,780 belongs to the Edinburgh hospitals. The school endowments mainly in connection with elementary schools in Aberdeen, Dundee, Edinburgh, and Glasgow amount to 19,090*l.*, and in the rest of Scotland to 23,889*l.*; the school endowments mainly in connection with

secondary schools amount to 16,550*l.*; general endowments to 17,118*l.*; and the educational portion of mixed endowments to 18,640*l.* There are university endowments, including chairs founded since 1808, to the amount of 22,020*l.*

EDUCATION IN IRELAND.—The report of the Commissioners of National Education for 1874 states that on the 31st of December last there were 7,257 schools in operation, being 97 more than in 1873. The number of children on the rolls who made any attendance was 1,006,511, which was an increase of 31,815 over the previous year. The average daily attendance was 395,390, which was 31,815 more than in 1873. The Commissioners explain the irregularity of the attendance by the habit, and in most cases the necessity, of employing the children during certain seasons in farm work. They have endeavoured to make other schools attractive, and the system of payment by results has acted as a stimulus, and there has been a decided improvement in the attendance. There were 85 schools struck off the rolls, chiefly for insufficient attendance, and five schools suspended. The number of warranted schools is 5,356. There are 1,252 clerical and 204 lay Roman Catholic managers, 261 clerical and 368 lay Protestant Episcopalian managers, 328 clerical and 178 lay Presbyterian managers, 88 clerical and 42 lay managers of other denominattons, and 207 official lay managers. There are 4,741 schools under Roman Catholic clerical management. Over 79 per cent. of the pupils in attendance are Roman Catholic, 11 per cent. Presbyterian, and over 8 per cent. Protestant Episcopalian. The average daily attendance in the model schools was 8,619; in 1873 it was 8,654. The number on the rolls is larger. During the year 528 teachers, of whom 186 were trained in Dublin at the public expense, were withdrawn from the service. The commissioners are considering the expediency of altering their system of enrolment, which is different from that in England. At present every child who has attended even for a day is counted, and if attending different schools at different periods may be reckoned several times. This system tends to erroneous inferences.

THE BRITISH MUSEUM.—The annual accounts relating to the British Museum, just issued, show that in 1874 the total number of visitors was 601,843, against 576,019 of the preceding year. To the general collection last year there were 461,059 visitors, and in the preceding year 442,264. Of the number last year there were 2,471 admitted on Monday and Saturday evenings, from six to eight o'clock, from the 8th of May to the 15th of August inclusive, as compared with 2,114 persons admitted in 1873. The number is in addition to 858 persons admitted to the Christy collection. The number of readers during the past year, as appears from returns issued to the British Museum, was 104,727, giving an average of 358 daily, and each reader consulted on an average 13 volumes per diem. From the 8th proximo to the 14th of August the public will be admitted till 8 o'clock on Mondays and Saturdays. The Museum will close from the 1st to the 7th of May, both inclusive.

THE NATIONAL GALLERY.—The annual report of the director of the National Gallery for the year 1874, states that the collection of early Italian schools has been enriched by the addition of fourteen pictures from the Barker collection, sold by auction in London in the month of June, 1874. These works were purchased by a special grant voted by Parliament in August last, amounting to 10,395*l.*, viz.: —1, "Madonna and Infant Christ," by Antonio Vivarini; 2, "Madonna in Prayer," by Cosimo Tura; 3, "The Madonna in Ecstasy," by Carlo Crivelli; 4, "St. Catherine," by Carlo Crivelli; 5, "Mary Magdalene," by Carlo Crivelli; 6, "The Nativity," by Pietro della Francesco; 7, "Madonna and Child," by Benvenuto da Siena; 8, "The Triumph of Chastity," by Luca Signorelli; 9, "The Return of Ulysses to Penelope," by Bernardino Pinturicchio; 10, 11, 12, "The Story of Griselda, from Boccacio's "Decameron," by Bernardino Pinturicchio, in three compositions—"The Marriage," "The Divorce or Separation," and the "Restoration;" 13, "Mars and Venus," by Sandro Botticelli; 14, "Venus Reclining;" by Sandro Botticelli. Owing to want of space, it has not been possible yet to place all these pictures in the Gallery. Under the head of bequests and donations the director reports that three pictures by the late Thomas Sword Good, of Berwick-on-Tweed, have been bequeathed by his widow, Mrs. Mary Evans Good—"No News," "A Fisherman with a Gun," "A Study of a Boy." A picture of "Orpheus Charming Birds and Beasts with the Music of his Lyre," by Roelandt Savery, has been bequeathed by Mr. S. James Ainslie. A "Portrait of Cardinal Fleury," by Hyacinthe Rigaud, has been presented by Mrs. Charles Fox. The Galleries in Trafalgar Square and South Kensington have (assuming that all the visitors to the Museum attend the picture galleries) been visited by 1,721,431 persons on the public days during the year 1874—807,304 at Trafalgar Square, and 914,124 at South Kensington. The daily average attendance at Trafalgar Square, open to the public 188 days, has been 4,291 for 1874; for the year 1873 it was 4,410.

THE NATIONAL PORTRAIT GALLERY.—The trustees of the National Portrait Gallery, in their eighteenth annual report, state that during the past year six donations of portraits have been received, and ten purchases have been made. This increases the number of donations to 121, and the

number of purchases to 280. The donations are—Sketch in oil on a small mahogany panel of Sir Walter Scott, by Landseer, presented by Mr. Albert Grant; a marble bust of Mr. Charles Knight, by Mr. Joseph Durham, A.R.A., presented by the sons and daughters of George and Mary Clowes, Mr. Knight's grandchildren; a drawing in chalk, by Sir Thomas Lawrence, of Mr. Samuel Rogers the poet, presented by Mr. Henry Rogers, nephew of the poet; an oil painting of Margaret Douglas, Countess of Lennox, mother-in-law of Mary Queen of Scots, presented by Dr. Hugh Diamond, F.S.A.; an oil painting of Anne Clifford, Countess of Pembroke and Montgomery, at the age of eighty-one, presented by Mr. George Scharf, F.S.A.; and a portrait, by Mr. I. Hayes, of Miss Agnes Strickland, presented in accordance with her will by her sister, Mrs. Gwillym. The purchases made during the year are portraits of Edmund Burke, Warren Hastings (by Sir Thomas Lawrence), Lord Chancellor Loughborough, Lord Nelson, Lord Chancellor Thurlow, and Miss Mitford; plaster casts of King Henry IV and Queen Joan of Navarre, his second wife, from the alabaster effigies on their monuments in Canterbury Cathedral; and a bust of Mr. John Zoffany, R.A. The number of visitors to the gallery in the year 1874 was 65,201. The trustees again urge upon the consideration of the Government "the difficulties which still impede an advantageous display of the portraits and works of art intrusted to their care, owing to want of space."

7. EMIGRATION.

Irish Emigration Statistics.—The Irish Registrar-General has issued a return of the number of emigrants, natives of Ireland, who left the country during the first four months of the years 1874 and 1875; also the total emigration in each year, from the 1st of May, 1851, to the 30th of April, 1875. These important returns are obtained in Dublin by experienced pensioners from the Metropolitan Police, and at the various other ports by enumerators selected from the Royal Irish Constabulary. The number of emigrants during the first four months of 1874 was as follows:—January, 2,052 males, 680 females; February, 2,157 males, 1,113 females; March, 3,223 males, 2,239 females; April, 5,900 males, 5,065 females. The numbers during the first four months of 1875 were as follows:—January, 1,099 males, 707 females; February, 1,505 males, 1,126 females; March, 2,252 males, 1,851 females; April, 4,507 males, 4,673 females. The emigration from Ireland in each year from the 1st of May, 1851, to the 30th of April, 1875:—1851, 152,060; 1852, 190,322; 1853, 173,148: 1854, 140,555; 1855, 91,914; 1856, 90,781; 1857, 95,081; 1858, 64,337; 1859, 80,599; 1860, 84,621; 1861, 64,292; 1862, 70,117; 1863, 117,229; 1864, 114,169; 1865, 101,497; 1866, 99,467; 1867, 80,624; 1868, 61,018; 1869, 66,568; 1870, 74,855; 1871, 71,240; 1872, 78,102; 1873, 90,149; 1874, 73,184; 1875 (30th April), 17,720; in all, 2,343,649.

Number of Emigrants from the United Kingdom to various Destinations.—The following Table shows the Destination of the Emigrants from the United Kingdom from 1859 to 1874:—

Years.	To the North American Colonies.	To the United States.	To the Australian Colonies and New Zealand.	To other places.	Total.
1859	6,689	70,303	31,013	12,427	120,432
1864	12,721	147,042	40,942	8,195	208,900
1869	33,891	203,001	14,901	6,234	258,027
1874	25,450	148,161	53,958	13,445	241,014

8. THE POST OFFICE.

The Work of the Year.—From the report of the Postmaster-General for 1874, it appears that the number of post-offices in the United Kingdom was increased last year by 280, making in all nearly 13,000, about 900 of which are head offices. The number of road letter-boxes is now nearly 9,700, as compared with 9,000 in 1873. Thus, the total number of postal receptacles in the United Kingdom is more than 22,000, as compared with about 15,600 ten years ago, and with little more than 4,500 before the establishment of penny postage in 1840. In London alone there are nearly 1,700 such receptacles. The number of letters transmitted in England and Wales in 1874 was 804 millions; of post cards, 66 millions; and of book packets and newspapers, 207 millions. In Ireland and Scotland the numbers were brought up to 967 million letters, or an increase of 6¾ per cent. in the year; 79 million post-cards, or

an increase of 9¾ per cent.; and 259 million newspapers and book parcels, or an increase of 2 per cent. The number of registered letters in the United Kingdom during the year was upwards of 4 millions, or about one in 250 of the total number of letters. The letters received in the Returned Letter Office numbered more than 4,400,000, being about one in every 220 of the total. As respects more than three-fourths of these it was found possible either to re-issue them or to return them to the writers. Upwards of 20,000 letters were posted without any address; one of these letters containing more than 2,000*l.* in Bank notes.

TELEGRAPH DEPARTMENT.—There was again a large increase in the amount of postal telegraph business; the number of messages (exclusive of newspaper telegrams) having last year been about 19 millions, or 10 per cent. more than in 1873.

SAVINGS BANK DEPARTMENT.—In the department of the Post-office Savings Banks business continues to increase steadily, Last year there were 178 new offices opened in England and Wales; 23 in Scotland, and 14 in Ireland; the total number in the United Kingdom at the end of the year being upwards of 5,000. Since the establishment of the Post-office Savings Banks, thirteen years ago, the number of old savings banks has diminished from 638 to 476; which latter number is less by 100 than the present number of Post-office Savings Banks in the London district alone. The number of depositors has increased by about 112,000, making the whole number at the end of the year nearly 1,670,000, while the amount of deposits, including interest due, was upwards of 23,000,000*l.*, being about 2,000,000*l.* more than in 1873. The whole sum deposited during the year was upwards of 8,300,000*l.*, as against nearly 6,900,000*l.* withdrawn, the averege amount of each deposit having been about 2*l.* 14*s.*, as compared with about 6*l.* 8*s.*, the average amount of each withdrawal. The usual tendency has been for the deposit average slightly to diminish and for the withdrawal average considerably to increase; but last year the tendency in each case, though very small, was in the other direction. The proportion of depositors to population was about 1 to 20, the largest being in England and Wales, viz., 1 to 15, and the smallest in Ireland, where it was about 1 to 100. In the latter case, however, the average sum belonging to each depositor, viz., 16*l.* 14*s.* nearly, was about 2*l.* 16*s.* more than the general average.

REVENUE AND EXPENDITURE.—From postage and money orders the gross revenue properly appertaining to the year was 5,651,000*l.*, being an increase of 280,000*l.* on the previous year, or more than 5 per cent. The expenditure properly appertaining to the year was 3,915,000*l.*, as compared with 3,793,000*l.* in 1873; showing an increase of more than 3 per cent. The chief items of expense were 1,874,000*l.* for salaries, wages, pensions, &c.; 916,000*l.* for conveyance by mail packets and private ships; 650,000*l.* for conveyance by railway; 157,000*l.* for carriage by coaches, carts, and omnibuses; and 169,000*l.* for buildings, repairs, &c. These items, as compared with those in 1873, exhibit an increase of 100,000*l.* in salaries, &c.; of 5,000*l*, for conveyance by railway; of 9,000*l.* for carriage by coaches, &c.; and of 36,000*l.* for buildings, &c.; together with a decrease of 29,000*l.* for conveyance by mail packets and private ships. The net revenue was 1,736,000*l.*, as compared with 1,578,000*l.* in 1873, showing an increase of 158,000*l.*, or about 10 per cent. If the several departments of Government had been charged with postage, both the gross and net revenue from postage would have been increased by nearly 100,000*l.* From telegraphs the gross revenue last year was 1,160,000*l.*, and the expenditure 1,051,000*l.*, leaving the sum of 109,000*l.* applicable to the payment of interest upon the capital raised for the purchase of the telegraphs by the State. The interest on the money placed in the hands of the National Debt Commissioners on account of the savings banks was last year 743,000*l.*, while the interest credited to the depositors was 524,000*l.*, and the expenditure (exclusive, however, of postage, which, if charged, would have amounted to about 36,000*l.*) was 100,000*l.*, making a total of 624,000*l.*, and leaving a profit of 119,000*l.* Including the profit of previous years, but making no deduction for postage, there is now an aggregate profit of 829,000*l.*

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9. LAW AND POLICE.

COUNTY COURTS.—A statistical record of the county court proceedings in 1874 has been issued in the shape of a parliamentary return. Including the City of London court, which has special jurisdiction, there are 60 circuits throughout England and Wales, the number of courts in each circuit varying with the extent of the district as well as with the amount of work to be accomplished. Thus Circuit i, embracing the whole of Northumberland, has 11 separate courts, and had 8,982 plaints entered during the twelvemonth; while Circuit vi, Liverpool and neighbourhood, has but 3 courts, with more than thrice the plaints entered in Circuit;—namely, 27,689. The aggregate number of days that the various courts sat was 8,194, giving a mean of 136¼ days per circuit. The whole number of plaints entered during the year was 879,400. Of

that number, 863,958 were for individual amounts not exceeding 20*l.*; only 15,422 were for sums over 20*l.* but not exceeding 50*l.*, the latter sum being the limit of the ordinary jurisdiction of the county court. That limit, by consent of the litigants, may, however, be exceeded, and this took place in twenty-two cases. Ten years ago, the number of plaints entered at these courts was 738,369; hence, last year, they were 141,000 more than in 1864. The mere circumstance of "county-courting" a debtor, in a large number of instances, apparently suffices to secure the creditor's object. Last year, not many more than one half the plaintiffs had to come into court; the number of causes determined being 501,582, of which only one cause in 500 was tried with the aid of a jury; the exact number of jury cases was 1,045. The causes determined, issued in these results to the parties concerned, there were 292,865 judgments for plaintiff; 179,425 for plaintiff by consent or admission: 8,209 were nonsuits, and the defendant won in 9,426 cases. The gross amount for which plaints were entered was 2,748,056*l.*; the amount of the "determined cases" was 1,318,897*l.* Hence, the initiatory step in the proceedings brought to the creditor more than half the money in contest. The average sum in litigation on all plaints entered was 3*l.* 2*s.* 6*d.* each. The total amount of fees "on all proceedings" was 358,579*l.*; this divided among the plaints entered gives an average fee of 8*s.* 2*d.*

METROPOLITAN POLICE.—The annual accounts presented to Parliament for the year ending the 25th of March last, have been printed. On the 1st January last the force amounted to 9,940, consisting of 4 district superintendents, 25 superintendents, 276 inspectors, 986 sergeants, and 8,649 constables. The balance in hand on the 1st of April, 1874, was 157,282*l.* 15*s.* 7*d.*, which, with the receipts in the year, amounted to 1,183,965*l.* 10*s.* 1*d.* The total sum paid for the Metropolitan Police between the 1st of April, 1874, and the 31st of March last was 1,099,851*l.* 9*s.* 9*d.*, leaving a balance of 84,114*l.* 0*s* 4*d.* The Superannuation Fund account shows the receipts to be 112,707*l.* 17*s.* 1*d.* There were 2,807 superannuations on the list, amounting to 110,152*l.* 6*s.* 1*d.* Gratuities, amounting to 2,555*l.* 10*s.*, were given to 54 constables. For the service of the police courts in the year there are various receipts and payments. The fines and penalties at police-courts amounted to 15,913*l.* 16*s.* 11*d.* Since the 1st of January the fines were paid by means of Inland Revenue stamps, and have ceased to be accounted for to the receiver from that date. The stamps used by the police in the year amounted to 4,007*l.* 2*s.* The cost of coals supplied to constables and for police-stations in the year amounted to 11,400*l.* 11*s.* 2*d.* The amount received from proprietors, drivers, and conductors of public carriages in the year was 22,522*l.* 10*s.* 10*d.* There is an item of 427*l.* 2*s.* 3*d.* as "expenses of education of police."

10. MISCELLANEOUS.

CIVIL LIST PENSIONS.—The following list of all pensions granted during the year ended the 20th June, 1875, and charged upon the Civil List, has been published with the parliamentary papers: — Mrs. Clarissa Hester Cattermole, in consideration of the services rendered to art by her husband, the late George Cattermole, painter in water colours, 100*l.* Mrs. Sarah Falcieri, widow of Giovanni Battista Falcieri, the faithful servant of Lord Byron, 50*l.* Mr. John Turtle Wood, in recognition of his labours at Ephesus and the distinguished service rendered by him to science and history by the discovery of the site of the Temple of Diana, and by the acquisition for the British Museum of a most valuable collection of sculptures, architectural marbles, and Greek and Roman inscriptions, 200*l.* Bessie, Lady Helps, in consideration of the long and able services rendered by her late husband, Sir Arthur Helps, D.D.L., K.C.B., as Clerk of Her Majesty's Privy Council, and in recognition of his literary talents, 200*l.* Mrs. Frances Eliza Kingsley, as a tribute of respect to the memory of her late husband, the Rev. Charles Kingsley, canon of Middleham and Westminster, a scholar, author, and divine, 200*l.* Mrs. Anne Williams, in recognition of the services rendered to Welsh literature by her late husband, the Rev. Morris Williams, rector of Llanrhyddlad, Anglesey, better known as Nicander, 50*l.* Mrs. Harriet Christiana Dwelly, in consideration of the long and able services, extending over a period of forty years, of her late husband, John Holmes Dwelly, Chief Clerk in the Department of the Solicitor to the Commissioners of Inland Revenue, 50*l.* Mrs. Frances Philip, in consideration of the services rendered to art by her late husband, John Birnie Philip, the sculptor, 100*l.* Mrs. C. L. G. Maclean, in recognition of the distinguished services of her late husband, Colonel John Maclean, C.B., formerly Lieutenant-Governor of Natal, during the Kaffir wars of 1846-7 and 1850-1-2-3, and in consideration of her destitute circumstances, 100*l.* Elizabeth Helen, Lady Grant, in recognition of the distinguished services rendered to his country by her late husband, General Sir James Hope Grant, G.C.B., 150*l.* Total, 1,200*l.* The Civil List pensions granted during the present reign, and still payable, amounted in the last financial year to 20,964*l.* These pensions are granted annually to the extent of 1,200*l.*

CHRONICLE OF EVENTS AND OCCURRENCES.

Home and Foreign.

From November, 1874, *to November*, 1875.

1874.

Nov. 4. Bombardment of Irun commenced by the Carlists.
5. Bank rate reduced to 3½ per cent.
6. The Metropolitan Board of Works carried resolutions in favour of an application to Parliament for powers to free the London Bridges from Tolls, and in favour of taking immediate steps to provide an independent gas supply for the metropolis.
7. Commencement of the nightly concerts at the Royal Albert Hall.
—. Publication of Mr. Gladstone's pamphlet on the Vatican Decrees.
9. The Right Hon. David H. Stone, entered on his office as Lord Mayor of London.
10. The Master of the Rolls declared further enclosures of Epping forest to be illegal.
11. The siege of Irun raised and the Republicans entered the town.
12. Re-arrest of Count Arnim.
13. Mr. Disraeli re-elected Lord Rector of Glasgow University by 700 votes against 500 given to Mr. Emerson.
14. Lord Derby elected Lord Rector of Edinburgh University with 770 votes against 583 given to Dr. Lyon Playfair.
15. Parliamentary elections in Italy: General Garibaldi returned for two electoral districts in Rome.
16. Bank rate raised from 4 to 5 per cent.
17. The decision of the Government to organize the Arctic Expedition announced.
19. Burning of the "Cospatrick" emigrant ship on her way to New Zealand, 460 lives lost.
23. Baptism of Prince Alfred of Edinburgh, at Buckingham Palace.
24. Mr. MacIver (Conservative) elected for Birkenhead, *vice* the late Mr. Laird, by a majority of 947 votes.
26. Dean Stanley elected Lord Rector of St. Andrew's University by 70 votes against 66 recorded for the Marquis of Salisbury.
—. Handel's *Judas Maccabæus* performed for the first time in Paris by the newly formed Society of Sacred Harmony.
—. Dr. West Jones enthroned as Bishop of Capetown and Metrolitan of South Africa, the see having been vacant since Bishop Gray's death.
28. Letter from Dr. Manning declaring persons who refuse to accept the dogmas of the Immaculate Conception and the Infallibility of the Pope, to be excommunicate, read in the Roman Churches in England.
29. Great gale and numerous shipwrecks on the English and Scottish coasts.
—. Wreck of the La Plata with the River Plate cable on board, sixty lives lost.
30. Dr. Caird, Vice-Chancellor and Principal of Glasgow University, lectured on "Missions," in the nave of Westminster Abbey.
—. Bank rate raised from 5 to 6 per cent.

Dec. 1. M. Buffet re-elected President of the French Assembly by 348 votes against 204 blanks.
—. First performance in the new Opera House at Paris.
2. The Prince of Wales proclaimed Grand Master of the Freemasons of England.

Dec. 2. The benchers of Gray's Inn resolved to disbar Dr. Kenealy, his name being also removed from the list of Queen's Counsel by the Lord Chancellor.
3. Distribution of medals to men distinguished in the Ashantee War.
—. Captain Nares, of H.M.'s Ship "Challenger," appointed to the chief command of the new Arctic Expedition.
5. The Bill for rendering higher education in France independent of State control read a second time in the Assembly by 533 to 133.
7. Sir R. Phillimore gave judgment in the St. Alban's ritual case, in the Arches Court, condemning Mr. Mackonochie on the majority of the points raised, and suspending him for six weeks.
—. President Grant's message read in Congress.
9. The transit of Venus.
—. The trial of Count Arnim for the abstraction of State papers, commenced at Berlin.
10. Mr. H. R. Brand, Member for Stroud, unseated on petition on the ground of bribery at his election.
14. Wreck of the "Mongol," 16 lives lost, and of the "Delphina," 19 lives lost.
15 The trial of Count Arnim concluded.
—. Resolutions in favour of disestablishment and disendowment adopted by the United Presbyterian Synod of Scotland.
—. The Shakers ejected from New Forest Lodge.
16. Marshal Serrano left Madrid for the North, to command the army.
17. German gun-boats withdrawn from the Spanish Coast.
—. Prince Bismarck tendered his resignation, but the Emperor refused to accept it.
18. A vote of confidence in Prince Bismarck carried in the German Parliament, by 199 to 71.
19. Count Arnim sentenced to three months' imprisonment, with costs, for "an offence against public order."
—. A national gift to General Garibaldi voted by the Italian Parliament.
21. The Lord Chamberlain addressed a letter to the theatrical managers of London, calling their attention to the necessity for observing greater propriety on the stage.
23. The Finance Bill fixing the 1st January, 1879, as the date for the resumption of specie payments passed in the American Assembly.
24. Colliery explosion at Bignall Hill, Staffordshire; 17 lives lost.
—. Fatal railway accident, near Shipton, Oxford, on the Great Western Railway, the carriages being thrown over an embankment; 31 persons killed and upwards of 70 wounded.
28. Dr. Ball's appointment as Lord Chancellor of Ireland announced in Dublin.
31. Prince Alphonso proclaimed King of Spain.

1875.

Jan. 4. Riot in the Louisiana Legislature at New Orleans; the Conservatives left the building, and a Republican House was formed.
5. Inauguration of the New Opera House, at Paris, Marshal MacMahon, King Alphonso of Spain, the ex-Queen Isabella, the King of Hanover, and the Lord Mayor of London being present.
—. The sum of 100,000*l.* left by Sir F. Chantery for the promotion of art, became available by his widow's death.

Jan. 6. Proclamation by Don Carlos, protesting against the assumption of the Crown by Alphonso.
—. Message of Marshal MacMahon to the French Assembly on the Constitutional Laws of the Second Chamber. The Ministry defeated by 420 votes against 250, declining to give priority to the Bill for creating the Senate.
7. Bank rate reduced from 6 to 5 per cent.
9. King Alphonso landed at Barcelona.
14. Bank rate reduced to 4 per cent.
—. Arrest of the Guikwar of Baroda, by order of the Viceroy, on the charge of having instigated the attempt to poison Colonel Phayre.
—. Conference on sanitary reform at Birmingham.
—. King Alphonso entered Madrid.
15. Publication of Mr. Gladstone's letter to Earl Granville (dated 13th instant) announcing his final decision to retire from the Liberal Leadership.
18. The case of Rubery *v.* Grant and Sampson, known as "The Great City Libel Case," closed after ten days' trial, with a verdict against Sampson, damages 500*l.*
—. Illness of Prince Leopold.
20. Bill for the Channel Tunnel between England and France presented to the French Assembly.
25. The Civil Marrage Bill passed by the German Parliament.
—. The Bill of M. Lefévre-Pontalis for the formation of the Senate read a second time in the French Assembly.
—. General Garibaldi took the oaths and his seat in the Roman Parliament.
28. Bank rate reduced to 3 per cent.
30. M. Wallon's amendment providing that the President of the French Republic is to be named for seven years, and to be eligible for re-election, carried by a majority of one in the French Assembly.

Feb. 1. Mr. Justice Keating retired from the bench.
2. Publication of Mr. W. E. Forster's letter stating that even if a majority of the Liberals wished him to succeed Mr. Gladstone as their leader, he would feel compelled to decline the task.
3. Meeting of Liberals, held at the Reform Club, Mr. John Bright presiding. The Marquis of Hartington requested to become the leader of the party.
—. Prince Leopold convalescent.
4. Marriage of Princess Louise of Belgium with Duke Philip of Saxony.
5. Second Session of the ninth Parliament of Queen Victoria opened by commission, the address to Her Majesty being moved and seconded by Lord Donoughmore and Lord Rayleigh, in the Upper House, and by Mr. Stanhope and Mr. Whitelaw in the Lower.
6. Funeral of Sir Sterndale Bennett at Westminster Abbey.
8. Festival to celebrate the third centenary of the University of Leyden.
9. The Judicature Act Amendment Bill and the Bishop of Peterborough's Church Patronage Bill introduced in the House of Lords.
10. Centenary of Charles Lamb's birth.
11. The French Assembly adopted M. Duprat's proposal for the election of the Senate by universal suffrage, by 322 votes to 310.
12. The Senate Bill rejected in the French Assembly on its third reading, by a majority of 25.
14. Outrage in the Chinese prison at Singapore, the Governor murdered.

Feb. 16. Dr. Kenealy returned to the House of Commons as Member for Stoke and Mr. Mitchel as Member for Tipperary.
—. Prince Louis Napoleon passed his final examination at the Academy at Woolwich.
17. Bill for Legalizing Marriage with a Deceased Wife's Sister rejected in the House of Commons, by 171 to 142.
18. Bank rate raised from 3 to 3½ per cent.
—. Sir Garnet Wolseley appointed administrator of the Government of Natal.
—. Mr. Praed unseated for St. Ives.
22. Mr. Huddleston, Q.C., M.P. for Norwich, appointed Judge of the Court of Common Pleas, *vice* Sir G. Honyman resigned.
24. The amended Senate Bill passed by the French Assembly by a majority of 207.
—. The Increase of the Episcopate Bill (Lord Lyttelton's) read a second time in the Lords.
25. The Earl of Kellie's claim to the Mar Peerage allowed.
—. The Privy Council Committee gave judgment in the Exeter reredos case, confirming Sir Robert Phillimore's decision as to the legality of the sculptured reredos.
27. Sir Charles Lyell buried in Westminster Abbey.
March 3. M. Buffet undertook to form a new Cabinet at Paris.
5. Mr. Praed again returned for St. Ives, with a majority of 108 over Sir F. Lycett, and Mr. Tillett elected for Norwich by 798 votes over Colonel Wilkinson.
8. The Judicature Bill withdrawn by the Lord Chancellor.
–. Pastoral letter from the Archbishops and Bishops to the Clergy and laity on the present state of the Church of England, published in the newspapers.
9. Messrs. Moody and Sankey, the American Evangelists, held their first service in London.
10. The new Ministry announced in Paris, with M. Buffet as Vice-President of Council.
11. Mr. John Mitchel, whose return had been set aside on the ground that he was a felon with his sentence uncompleted, again returned for Tipperary.
15. The Duc d'Audiffret-Pasquier, elected President of the French National Assembly in succession to M. Buffet.
—. Mr. Charles Lennox Peel appointed to succeed Sir Arthur Helps as Clerk of the Privy Council.
16. Dr. Manning, Roman Catholic Archbishop of Westminster, elevated to the dignity of Cardinal, by the Pope.
18. The Regimental Exchanges Bill read a third time and passed in the Commons.
20. The University boat-race won by Oxford by seven lengths.
23. The second reading of the Irish Peace Preservation Bill carried in the Commons by 264 to 69.
—. Lord Charles Russell resigned his office as Serjeant-at-Arms.
24. Prince Bismarck created Duke of Lauenberg.
29. Great volcanic eruption in Iceland.
April 6. Festival at Charterhouse, to commemorate the installation of Merchant Taylors' School in the buildings hitherto occupied by Charterhouse School, the Prince of Wales presiding.
–. Meeting at Exeter Hall, in support of Mr. Plimsoll's movement to obtain greater safeguards for the protection of life at sea.
8. The Government Merchant Shipping Bill read a second time in the Commons.
10. Captain Boyton crossed the Channel from Dover to Cape Grisnez, in his india-rubber dress, propelling himself with a paddle.
15. Sir Stafford Northcote introduced the Budget providing for the

remission of a small tax on admission to civil offices, and for the application of 185,000*l.* to the reduction of the National Debt.

April 19. The Rev. G. R. Gleig issued his farewell address on retiring from the office of Chaplain-General of the Army.

21. Mr. Osborne Morgan's Burials Bill rejected in the House of Commons by 248 to 234, Mr. Gladstone speaking and voting in its favour.

22. The Bill for excluding the damnatory clauses from the public recitation of the Athanasian Creed, in the Irish Church, carried in the General Synod.

23. Proclamation of the Viceroy of India deposing the Guikwar of Baroda, published at Calcutta.

—. Dr. Kenealy spoke in the House of Commons on the Tichborne case, and concluded with a motion which was negatived by 433 to 1, the only member who voted for it being Major O'Gorman.

27. Prince of Wales installed at the Albert Hall as Grand Master of the Freemasons of England.

28. Consecration of Monsignor John Heijkamp, as (old Catholic) Archbishop of Utrecht.

30. Artisans' Dwellings Bill read a third time and passed in the House of Commons.

May 1. The Alexandra Palace at Muswell Hill, opened by the Lord Mayor.

4. Lord Selborne's Inns of Court and Legal Education Bills read a first time in the Lords.

7. Wreck of the American steam-ship "Schiller," by striking on the Retarrier Ledge, near the Bishop Lighthouse, Scilly; upwards of 300 lives lost.

8. Wagner's *Lohengrin* produced at the Royal Italian Opera, Covent Garden; first performance on the English stage.

—. The Norwich Election petition trial closed, Mr. Tillett, the Member, having decided, after reading the evidence, not to dispute the petitioner's case any further.

11. The Artisans' Dwellings Bill read a second time in the Lords.

12. Mr. Justice Lush gave in his report on the Norwich election petition, declaring bribery and corrupt practices to have taken place.

13. The Yorkshire Exhibition of Arts and Manufactures at Leeds, opened by the Duke of Edinburgh.

15. Verdi's Manzoni Requiem performed at the Albert Hall under the composer's direction (first time in England).

18. Earthquake in New Granada, South America; five cities overthrown and 16,000 persons perished.

19. Mr. Froude appointed to proceed to South Africa on a Government mission.

25. Sir Wilfred Lawson's amendment to the proposal to adjourn over the Derby day rejected by the Commons by 206 to 81.

27. Installation of the new Guikwar of Baroda.

29. The Arctic Expedition under Captain Nares, left Portsmouth.

—. Captain Boyton completed his journey across the Channel after being nearly 24 hours afloat.

June 2. The School of the Jesuit Fathers at Manchester closed by order from Rome.

4. The Earl of Home, the Earl of Dalhousie and Lord Grey de Wilton created peers of the United Kingdom.

7. The Bishop of Peterborough's Church Patronage Bill passed by the Lords.

Debate in the Commons on Sir Stafford Northcote's plan for the reduction of the National Debt; an amendment of Mr. Gladstone rejected by 189 to 122.

June 8. Epidemic of measles in the Fiji Islands and deaths of many thousands of natives reported.
9. The Compulsory Education Bill of Mr. Dixon rejected in the Commons by 255 to 164.
–. The Seyyid of Zanzibar arrived in England.
11. Result of Marshal MacMahon's arbitration in the Delagoa Bay case announced in favour of the claim of Portugal to its possession.
12. Wagner's *Lohengrin* produced at Her Majesty's Opera, Drury Lane.
13. Hospital Sunday in London.
14. Boieldieu Centenary Festival at Rouen.
15. Suspension of Messrs. Collie and Co. announced; liabilities three millions.
—. The Government Bill for the creation of the new Bishopric of St. Alban's read a second time in the Lords.
—. Dr. Kenealy's Bill for Triennial Parliaments rejected in the Commons.
—. The representatives of the city of London met at Marlborough House, at the request of the Prince of Wales, in reference to the support of the National Training School for Music.
16. The Permissive Bill rejected in the Commons by 371 to 86.
17. The motion for a Commission to enquire into the Norwich Election Petition agreed to in the Commons.
20. The newly formed Japanese deliberative Assembly opened by the Mikado, at Yeddo.
21. The Seyyid of Zanzibar received by the Queen at Windsor.
22. Conference of churchmen in London on Foreign Missions.
23. Great floods at Toulouse; many hundreds of persons drowned, and 20,000 left destitute.
—. Bill for the repeal of the Contagious Diseases Acts rejected by the Commons by 308 to 126.
25. Announcement of the appointment of a Royal Commission on Vivesection.
28. The Marlborough gems sold in one lot to Mr. Agnew, acting for Mr. Bromilow of Battlesden Park, Bedfordshire.
30. The Channel Tunnel Bill adopted by the Committee of the French Assembly.
—. The *Echo* passed into the hands of Baron Grant as proprietor, and Mr. Arthur Arnold retired from its editorship.

July 1. The Public Worship Regulation Act (37 and 38 Vict., cap. 85), came into force.
2. The Lower House of Convocation for the Province of Canterbury, adopted Canon Gregory's resolution in favour of leaving the wearing of special vestments by the celebrant at the Holy Communion optional, with discretionary authority to the Bishop to prevent the introduction of the practice in parishes where it had not been the rule.
6. Opening of the first floating bath on the River Thames.
7. The Carlists defeated and Cantaviaga taken.
8. The Bank rate reduced to 3 per cent.
–. Meeting in the city of London to promote a fund for the relief of the sufferers by the inundation in France.
15. Vote of 60,000*l.* for the expenses of the Prince of Wales's visit to India, carried in the House of Commons by 350 to 16.
—. Floods in Wales, Gloucestershire, &c.; a dam burst near Monmouth, drowning thirteen persons.
—. The Seyyid of Zanzabar left London.
16. Meeting at Willis's Rooms under the presidency of Mr. Disraeli, to promote the erection of a public memorial of Lord Byron.
—. General Sir Charles Yorke installed as Constable of the Tower.

July 20. The Queen's Prize at Wimbledon, won by Captain Pearse of the 18th Devon, who scored 73.
21. Messrs. Alex. and W. Collie, merchants, charged at the Guildhall, by the London and Westminster Bank, with fraudulently representing accommodation bills to be trade bills. The defendants were removed to Newgate.
—. The Prince of Wales presented to M. Chevalier the Albert Medal of the Society of Arts for promoting the advancement of arts, manufactures and commerce.
22. Mr. Disraeli announced in the House of Commons that the Government intended to abandon the Merchant Shipping Bill, whereupon Mr. Plimsoll appealed to the Premier "not to consign some thousands of living human beings to a miserable death," and declared "he would unmask the villains who send those sailors to death." Mr. Disraeli's motion that the Speaker do reprimand the member for Derby was only postponed for a week on the explanation of his friends.
24. The prizes distributed to the Volunteers at Wimbledon by Princess Louise.
29. Bank rate reduced to 2½ per cent.

Aug. 2. Colonel Baker sentenced to a year's imprisonment with a fine, for his assult upon Miss Dickinson in a railway carriage.
3. Bishop Thirlwall buried in Westminster Abbey.
4. Banquet to Ministers at the Mansion House.
—. Messrs. Moody and Sankey left Liverpool for New York.
—. Opening of the pumping station at Pimlico, forming the completion of the metropolitan system of main drainage.
6. The new Home Office, Whitehall, occupied for the first time.
—. O'Connell Centenary Festival in Dublin.
7. Both Houses of Parliament held special sittings (Saturday.)
9. Alexander Collie stated to have absconded on the resumption of the trial for fraud at the Guildhall.
10. The bicentenary of the Royal Observatory celebrated at Greenwich.
11. Lord Lyttelton's Bill for the Increase of the Episcopate withdrawn in the House of Commons by Mr. Beresford Hope.
12. Bank rate reduced from 2½ to 2 per cent.
—. Old Catholic Conference at Bonn opened.
—. Report of the serious nature of the Herzevogina insurrection received.
13. Colonel Baker's removal from the Army List gazetted.
16. Opening of the Norwich Election Commission, with Mr. Morgan Howard, Q.C., as first Commissioner.
—. The Prince and Princess of Wales opened Frith Park, Sheffield.
18. The "Miseltoe," a yacht belonging to Mr. Heywood, of Manchester, sunk in the Solent, having been run down by the Royal Yacht, "Alberta," which was conveying the Queen to Gosport, Miss Peel and two of the crew of the "Miseltoe" drowned.
24. Captain Webb swam across the Channel from Dover to Calais.
26. Financial crisis in California: the Bank of California at San Francisco suspended payment.
27. The enquiry into the collision in the Solent between the "Miseltoe" and "Alberta" before the Portsmouth coroner closed, the jury being unable to agree on a verdict.
—. Seo d'Urgel surrendered by the Carlists.
28. Railway accident at Kildwick, near Bradford, six deaths and more than twenty wounded.
29. The "Valorous" arrived home with the despatches from the Arctic expedition.
31. Siege of Trebinge raised.

Sep. 2. Riots at Montreal owing to the attempt to bury in the Roman Catholic cemetery the body of Joseph Guibord, who had been refused burial by the priests and whose body had been awaiting interment for five years.
–. H.M.S. "Vanguard" sunk by a collision with the "Iron Duke."
7. The first brick of the new National Opera House, to be erected under Mr. Mapleson's auspices, laid by Mdlle. Titiens on the Thames Embankment.
8. Pilgrimage of Germans to Lourdes.
10. Court-martial on the loss of the "Vanguard" opened.
17. Six Cardinals created by the Pope.
19. Festival at Falaise, in honour of William the Conqueror, whose statue was uncovered.
22. The Queen visited the Duke and Duchess of Argyll, at Inverary.
27. Railway jubilee celebrated at Darlington.
29. Alderman W. J. R. Cotton, M.P., elected Lord Mayor of London.
.— The court-martial on the loss of the "Vanguard" closed its sittings, and adjudged Captain Dawkins, the captain of the ship, to be dismissed from his command, and severely reprimanded.

Oct. 4. The *Echo* appeared as a halfpenny morning paper.
–. Fifteenth annual Church Congress opened at Stoke-upon-Trent.
7. Turkish Government announced that for five years from January, 1876, the interest on their foreign debt would be paid half in cash and half in 5 per cent. bonds.
–. Bank rate raised to 2½ per cent.
11. Prince of Wales left England for India.
13. Publication of the Admiralty minute on the loss of the "Vanguard."
14. Bank rate raised from 2½ to 3½ per cent.
20. Sir Robert Phillimore sat for the last time as Judge in the Court of Arches.

Nov. 1. The Judicature Act came into operation.
–. The Prince of Wales arrived at Aden.
2. The elections in the United States reported to be in favour of the Republican party.
3. Dr. Phear re-elected Vice-Chancellor of Cambridge University.
4. The French Assembly resumed its sittings.
5. Colonel J. Ireland Blackburne returned without opposition for South-West Lancashire, in the room of the late Mr. Charles Turner.
8. The Prince of Wales arrived at Bombay.
9. The Right Hon. W. J. R. Cotton entered upon his year of office as Lord Mayor of London.

NECROLOGICAL TABLE

OF DISTINGUISHED AND NOTABLE PERSONS WHO DIED FROM NOVEMBER, 1874, TO NOVEMBER, 1875.

1874		Age
Nov.	2. ANDERSON, Thomas, M.D., late Professor of Chemistry in the University of Glasgow; at Chiswick	55
	4. GLENNIE, Rev. John David, for many years Secretary of the Society for Promoting Christian Knowledge; at Green Street, Grosvenor Square	79
	5. HACKETT, Maria, the friend and benefactor of cathedral choristers; at Hackney	91
	6. LEVIEN, Edward, M.A., F.S.A., Assistant in the MSS. Department of the British Museum; at Camden Street	56
	10. GEARY, John, Captain R.N., one of the survivors of Trafalgar; at Greenwich	87
	—. WORMALD, John, Banker, senior partner in the firm of Child & Co.; at Highbury	77
	—. HARDMAN, Frederick, for 25 years correspondent of the *Times* in different parts of Europe; at Paris	61
	16. SMITH, Edward, M.D., F.R.S., Physician and Poor Law Inspector; at Harley Street	55
	17. VON CARNALL, Dr. Rudolph, Geologist; at Breslau	70
	18. KEMBLE, Rev. Charles, M.A., Rector of Bath, Prebendary of Wells; at Bath	55
	20. SPEARMAN, Rt. Hon. Sir Alex. Young, Bart., late Controller of the National Debt Office	81
	—. HOOD, Tom, Author and Journalist, editor of *Fun*; at Peckham Rye	40
	—. SMITH, General Sir J. M. Frederic, K.H., F.R.S., formerly M.P. for Chatham; at Notting Hill	82
	21. FORTUNY, P., Spanish Painter; at Rome	35
	22. BRISTOW, General Henry, the oldest English resident in Madrid, and probably in Spain; at Madrid	89
	27. MARTIN, Sir J. Ranald, M.D., C.B., F.R.S., Physician to the Council of India, Inspector-General of Hospitals; at Upper Brook Street	74
	29. READ, Hon. John Meredith, LL.D., Chief Justice of Pennsylvania; at Philadelphia	77
	—. DUDDEN, F. H., Captain of the "La Plata," by the foundering of that vessel; in the Bay of Biscay	32
Dec.	1. VON TISCHENDORF, Constantine, LL.D., Biblical Critic and Professor of Theology; at Leipzig	59
	2. PHILLIPS, Watts, dramatic author	45
	-. MACLEAN, John, Colonel, C.B., late Governor of Natal; at East London, Kaffraria	64
	3. WILLIAMS, John, F.S.A., for 28 years Assistant Secretary to the Royal Astronomical Society; at Burlington House	77
	5. WESTENRA, Colonel the Hon. J. C., M.P. for King's County, 1837–1852; at Roscrea	76
	8. WAPPERS, Baron, Belgian artist; at Paris	71

		Age
Dec.	9. CABBELL, Benjamin Bond, F.R.S., F.S.A., M.P. for St. Albans in 1846–47, and for Boston, 1847–57; at Chapel Street, Marylebone	94
	–. CORNELL, Hon. Ezra, Founder of Cornell University; at New York	68
	10. O'MALLEY, P. F., Q.C., Recorder of Norwich, for many years leader of the Norfolk Circuit; at Lowndes Street	
	11. ARBUTHNOT, William Urquhart, Member of Her Majesty's Indian Council; at Eaton Place	67
	—. GREY, George, Lieutenant-Colonel, Equerry to the Prince of Wales; at Sandringham	39
	—. MITCHELL, John, theatrical and musical agent; at Bolton Street	67
	—. GORNOSTALEV, Jean Ivanovitch, Professor of Architecture at the Russian Academy of Fine Arts; in Russia	
	—. WILSON, William Parkinson, Professor of Mathematics at Melbourne University; at Melbourne	
	12. O'BRIEN, Rt. Rev. James Thomas, Bishop of Ossory, &c.; at Thurloe Square	82
	14. BOYD, Sir William, A.M., M.D., Physician; at Bedford Square	71
	17. SONDES, Right Hon. Lord, served with the Horse Guards at Waterloo; at Elmham, Norfolk	80
	20. DISNEY, Very Rev. Brabazon William, Dean of Armagh; at Monkstown	77
	22. VOGAN, Rev. T. S. L., D.D., Prebendary of Chichester, author of "The True Doctrine of the Eucharist," and other theological works; at Arundel	74
	23. ROMILLY, Lord, late Master of the Rolls; at Cromwell Road, Kensington	72
	25. EDMUNDS, Flavell, for 27 years editor of the *Hereford Times;* at Hereford	59
	26. MOULTRIE, Rev. John, for 50 years rector of Rugby, poet; at Rugby	74
	28. SMITH, Hon. G., great landowner and opponent of slavery; at New York	78
	30. MONTROSE, Duke of, K.T., formerly M.P. for Cambridge, and a Member of the Privy Council since 1821; at Cannes	75
	31. LEDRU-ROLLIN, Alexandre Auguste, leader of the Radical party in France; at Paris	66
	—. MILWARD, Colonel, C.B., Superintendent of the Royal Laboratory at Woolwich	49
	—. KIERMAN, Dr., F.R.S., F.R.C.S., anatomist, physiologist, and surgeon; at Manchester Street	74
1875.		
Jan.	1. MACDONALD, William, M.D., Professor of Civil and Natural History in the University; at St. Andrews	77
	2. BIGNOLD, Sir Samuel, for 53 years secretary of the Norwich Union Fire Office, and formerly M.P. for Norwich; at Norwich	83
	–. HILL, Rowland, second Viscount Hill, M.P. for Salop, 1821–42; at Wem	74
	4 HOLLAND, Edward, formerly M.P. for Evesham, High Sheriff of Gloucestershire, and President of the Royal Agricultural Society; at Evesham	70
	5. COBDEN, Charles, only brother of the late Mr. Cobden	62
	6. FREDERICK WILLIAM, Elector of Hesse-Cassel; at Prague	72
	7. HONY, Ven. William, for 47 years Rector of Baverstock, and for 28 years Archdeacon of Sarum; at Salisbury	85

		Age
Jan.	7. BURNET, Rev. Thomas, D.D., F.R.S., Rector of St. James', Garlickhithe, City; at Brighton	91
	8. EUGENE, DUKE OF WURTEMBERG; at Carlsruhe	54
	—. PORTER, Richard, organist of St. John's College, Oxford; at Oxford	
	9. GRIESBACH, John Henry, author of "The Analysis of Musical Sounds," &c.; at Kensington	75
	10. MELBYE, Professor Daniel Herman Anton, Danish Painter; at Paris	56
	11. CHADWICK, James, one of the founders of the Anti-Corn Law League; at Leamington	89
	12. WESTPHEL, Sir George Augustus, Admiral, the last surviving officer of those who served with Nelson in the "Victory" at Trafalgar; at Brighton	88
	—. HAVERGAL, Rev. H. E., for 27 years Vicar of Cople, author of musical works; at Cople	54
	—. CHANDLER, Johanna, founder of the National Hospital for the Paralysed and Epileptic; at Albany Street	
	—. TOUNG-CHI, Emperor of China; at Pekin	18
	14. GRENIER, French actor; at Paris	42
	15. D'HALLOY, D'Omalius, the oldest Belgian Senator; at Brussels	92
	16. WALMISLEY, William E., late Clerk of the Journals in the House of Lords;	67
	20. MILLET, Jean Francois, French landscape painter; at Paris	60
	—. WAETZIG, J. G., for 22 years member of the private bands of George IV and William IV; at Forest Hill	84
	21. M'DONNELL, Right Hon. Sir Alexander, Resident Commissioner of National Educaton; in Dublin	77
	22. HITZIG, F., Theologian and Hebraist; at Heidelberg	98
	23. KINGSLEY, Rev. Charles, M.A., Canon of Westminster, author; at Eversley	55
	24. GRAY, John, Q.C., Solicitor to Treasury; at Gloucester Crescent	69
	26. FINLAY, George, Correspondent of the *Times* at Athens	
	27. PACKMAN, Robert Collier, M.A., Priest in Ordinary to the Queen, and Minor Canon of St. Paul's for nearly 50 years	83
	29. ST. LEONARDS, Lord (Edward Sugden), Lord Chancellor of England in Lord Derby's Government; at Thames Ditton	94
	—. HOPPUS, Rev. John, LL.D., Ph.D., F.R.S., Emeritus Professor of Mental Philosophy and Logic, University College, London; at Camden Street	85
Feb.	1. BENNETT, Sir William Sterndale, D.C.L., Professor of Music at the University of Cambridge, Principal of the R. A. M., composer; at 66, St. John's Wood Road	58
	2. CHAMPNEYS, Very Rev. William Weldon, M.A., Dean of Lichfield; at Lichfield	67
	6. WILKINSON, J. T., F.R.A.S., author of works on Lancashire Folklore; at Burnley	
	9. DE VERE, chess player; at Torquay	29
	14. DENT, Digby, Lieut., Superintendent of the Convict Prison at Singapore; killed by native prisoners	30
	15. DAMCKE, Jaques Berthold, composer of "Deborah" and other musical works; at Paris	63
	16. HOARE, John Gurney, banker; at Biarritz	64
	17. ARGELANDER, Friedrich Wilhelm August, Astronomer; near Bonn	75

			Age
Feb.	19.	PEEL, Very Rev. John, D.D., Dean of Worcester; at Waresley, Kidderminster	76
	—.	MARSHALL, T. Horncastle, Judge of the Leeds County Court for 29 years; at St. Leonards	76
	20.	COROT, Jean Batiste Camille, French historical painter; at Paris	78
	21.	GREG, Robert Hyde, M.P. for Manchester, 1839–41	79
	22.	LYALL, Sir Charles, Bart., F.R.S., F.G.S., geologist; at Harley Street	78
	24.	NORTON, Hon. G. C., for 38 years police magistrate at Lambeth; at Wonersh Park	75
	—.	FREEMAN, Philip, M.A., Archdeacon of Exeter, author of works on ritual and architecture; at Northumberland Terrace, Regent's Park	57
	28.	WILLIS, Rev. Robert, M.A., F.R.S., Jacksonian Professor of Philosophy; at Cambridge	75
March	1.	KELLETT, Sir Henry, K.C.B., Admiral; at Clonmel, Ireland	68
	2.	PHILIP, John Birnie, sculptor; at King's Road, Chelsea	50
	—.	LYE, Captain Daniel, believed to be the oldest officer of the Royal Navy; at Portsea	90
	4.	TIMBS, John, antiquarian and author	73
	—.	SMIRKE, Sir Edward, formerly Solicitor-General and Attorney-General to the Prince of Wales; at Thurloe Square	79
	7.	GRANT, Sir Hope, G.C.B., General, distinguished for his services in India and China; at Grosvenor Gardens	67
	—.	GRAY, Dr. John Edward, Naturalist, late of the British Museum; at the Museum	75
	—.	HELPS, Sir Arthur, K.C.B., Clerk of the Privy Council, author; at Lower Berkeley Street	61
	8.	HARDWICKE, Robert, publisher	
	9.	MCLEAN, Thomas, fine art publisher in London; at Selhurst	86
	10.	FULLER, Charles Francis, sculptor; at Florence	45
	15.	GOMM, Sir William Maynard, G.C.B., Field-Marshal, Constable of the Tower; at Brighton	90
	—.	LIMPUS, Richard, Organist of St. Michael's, Cornhill, Founder of the College of Organists; at Queen Square, Bloomsbury	50
	16.	MITCHELL, Thomas Alexander, M.P. for Bridport from 1841 to 1875; at Charles Street	63
	17.	LUMLEY, Benjamin, for many years manager of Her Majesty's Opera House; at Kensington Crescent	64
	19.	MITCHEL, John, twice returned as M.P. for Tipperary; at Drombane, near Newry	63
	—.	COX, George Valentine, M.A., formerly Esquire Bedel and University Coroner, author of "Recollections of Oxford;" at Oxford	89
	20.	OSMENT, David, Father of the Freemasons; at Sherborne	99
	21.	ROGERS, W. G., wood carver	83
	22.	DE JARNAC, Comte, French Ambassador at the Court of St. James's; at Albert Gate	53
	—.	BATEMAN, H. L., Lessee of the Lyceum Theatre; at Rutland Gate	
	23.	LLOYD, Thomas, C.B., late Engineer-in-chief at the Admiralty; at Finchley Road	71
	24.	PALMER, Dr. Silas, F.S.A., archæologist; at Newbury	
	27.	QUINET, Edgar, historian and philosopher, Member of the French National Assembly; at Versailles	72

		Age
March	29. MARTIN, John, M.P. for Meath County; at Dromalaone, near Newry	63
	—. BUDD, Edward Hayward, the "Father of Cricket," at Wroughton, Wilts	90
	31. PLEYEL, Marie, pianist; at Brussels	64
April	3. GIBBS, William, Merchant, a munificent supporter of various church institutions, and donor of the chapel at Keble College, Oxford; at Tyntesfield, Bristol	84
	5. BRISTOW, Alfred Rhodes, Solicitor to the Admiralty, formerly M.P. for Kidderminster; at Sydenham	
	8. GRAY, Sir John, M.D., M.P. for Kilkenny, editor and proprietor of the Dublin *Freeman*; at Bath	60
	9. MONSELL, J. S. B., LL.D., Vicar of St. Nicholas, Guildford, one of Her Majesty's Chaplains, author of poetical and theological works; at Guildford	64
	11. SCHWABE, Samuel Heinrich, astronomer, discoverer of the eccentricity of Saturn's ring; in Germany	85
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	5. EWALD, Henry George Augustus, Orientalist; at Gottingen	72
	6. OSBORN, Sherard, C.B., F.R.S., Rear-Admiral, Arctic Explorer; at 33, Charles Street	53
	13. AITCHISON, Sir John, G.C.B., General, Colonel of the Scots' Fusilier Guards, served at the siege of Copenhagen; at Devonshire Place	86
	16. GORE-LANGTON, W. H., formerly M.P. for Bristol; at Prince's Gate	73
	20. AMALIE, widow of the late King Otho of Greece; at Bamberg	57
	22. SINCLAIR, John, M.A., F.R.S.E., Archdeacon of Middlesex	

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	29.	LANE, Rev. Charlton, M.A., late Vicar of Hampstead, and Professor of Rhetoric at Gresham College; at St. John's Wood Park	78
	31.	HARDWICK, John, D.C.L., F.S.A., Metropolitan Police Magistrate from 1821 to 1856; at Brighton	83
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	2.	BIZET, Georges, composer of operas and orchestral works; at Bourgival	37
	3.	ARNOT, Rev. William, author, and minister of the Free High Church; at Edinburgh	67
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	5.	PUGIN, Edward Welby, architect; at 111, Victoria Street, Westminster	40
	6.	DE RÉMUSAT, Charles Francois, Comte de, politician and author; at Paris	78
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	27.	RITCHIE, Alexander, proprietor of the *Leeds Mercury*; at Hastings	79
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	30.	ROWBOTHAM, T. L., artist, member of the Institute of Painters in Water Colours; at Campden Hill	52
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	4.	HOUGH, Edwin, for 25 years sub-editor of the *Record*; at St. John's Wood	56
	6.	CLARKE, James F., F.R.C.S., for more than 30 years on the editorial staff of the *Lancet*; at Gerrard Street, Soho	62
	7.	CAIRNES, John Elliot, A.M., LL.D., political economist, Emeritus Professor of Political Economy in University College, London; at Blackheath	51
	17.	ARROW, Sir Frederick, Deputy Master of the Trinity House; at Brentwood	57

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	20.	HEAD, Right Hon. Sir Francis, Bart., K.C.H., formerly Lieutenant-Governor of Canada, author; at Croydon	82
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	28.	JOHNSON, Andrew, ex-President of the United States; at Jonesborough, Tennessee	66
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	9.	SHERLOCK, R. H., for 32 years proprietor and editor of the *Liverpool Mail*, from which he had only retired on the 31st of July; killed by lightning, at Ingleton, Yorkshire	68
	11.	DE FLEURY, Rohault, architect; in France	64
	15.	HAWKER, Rev. Robert Stephen, for 40 years rector of Morwenstow, author of poetical works, and of books on Cornish history and antiquities; at Plymouth	70
	17.	MARSHALL, William, Mus. Doc. Oxon, for more than 20 years organist of Christ Church and St. John's College, Oxford; at Handsworth	69
	21.	WILLIAMS, William Smith, the literary member of the staff of Messrs. Smith, Elder, and Co.; at Twickenham	75
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	22.	RYAN, Sir Edward, head of the first Civil Service Commission, Vice-Chancellor of the University of London; at Dover	81
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	11.	DE LIEM, General, ex-Minister of War, and for many years first Aide-de-camp to the King of Belgium; at Brussels	85
	12.	FARQUHARSON, F. E. H., V.C., Major in the 42nd Highlanders, served with the Black Watch in the Ashantee campaign; at Harberton	38

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	13. ROCHE, Henry Philip, Registrar of the London Court of Bankruptcy	58
	15. BLAKE, William John, F.R.S., M.P. for Newport, I.W., 1837-41; at Welwyn	70
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NOTE.—The Necrological Table here given contains the names of 222 distinguished persons, of all countries, who died during the twelve months from the commencement of November, 1874, to the commencement of November, 1875. Of this number 48, or more than 22 per cent., died at the age of 80 or more, and of these 13 were upwards of 90.

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W. H. STONE, ESQ., M.D.
JOHN CHARLES THYNNE, ESQ., M.A.
REV. HENRY WACE, M.A.
REV. CANON WILLIAMS, M.A.
F. L. WOLLASTON, ESQ., M.A.

Counsel.—THOMAS BOURDILLON, ESQ., M.A., Stone Buildings, Lincoln's Inn.
Solicitors.—MESSRS. LEE, BOLTON, and LEE, No. 2, Broad Sanctuary, Westminster.
Auditors.—CHARLES BARBER, ESQ. GEORGE J. BIDDULPH, ESQ. ROBERT J. LODGE, ESQ. REV. ALEXANDER WILSON, M.A.
Bankers.—MESSRS. COUTTS and CO. *Consulting Actuary.*—FREDERICK HENDRIKS, ESQ.
Physician.—DR. STONE, 14, Dean's Yard. *Actuary.*—STEWART HELDER, ESQ.
Secretary.—MATTHEW HODGSON, ESQ.

Total Funds .. .. £2,228,347.
Total Annual Income .. .. £266,603.

NO AGENTS EMPLOYED, AND NO COMMISSION PAID.

Reduced Premiums.—Assurances may be effected upon payment of four-fifths of the rates chargeable according to the Society's Table, subject to *certain conditions* fully set forth and explained in the Prospectus.

Claims.—The total amount of Claims paid upon death from the commencement of the Society to 1st June, 1875, was **£1,265,881.**

Bonus.—The whole available Bonus is the sole property of Life Assurers; no part whatever is taken from it to be shared amongst Proprietors. At the end of every fifth year, profits are equitably apportioned amongst existing Life Assurances. By means of Bonus, 585 of the earlier Life Assurances have been relieved altogether from the payment of Annual Premiums, and additions in almost every case have been made to the sums Assured; £280,000 was divided amongst Life Assurances at the last declaration of profits. **The next Bonus will be due 1st June, 1876, and Assurances made previously to such date will share therein.**

Assurers have the privilege, at the time of making an Assurance, of selecting the mode in which the Bonus, whenever due, shall be applied, viz.—in an immediate Cash payment, or to the reduction of the Annual Premium, or to the increase of the Capital sum assured.

ASSURANCES may be effected on LIVES, SURVIVORSHIPS, &c., &c., as stated in the Society's Prospectus, to any amount not exceeding £7,500.

This Society is strictly confined to the Clergy of the Church of England and of the Episcopal Church of Scotland, their Wives and Families, and the near relations of themselves and Wives.

Prospectuses, Bonus Accounts, Forms of Proposal, &c., may be had at the Office, on personal application, or by letter.

2, *Broad Sanctuary, Westminster.*

Eagle Insurance Company,

FOR LIVES ONLY,

79, PALL MALL, LONDON, S.W.

(ESTABLISHED 1807.)

DIRECTORS.

WILLIAM A. GUY, M.D., F.R.S., *Chairman.*
GEORGE RUSSELL, Esq., *Deputy-Chairman.*

CHARLES BISCHOFF, Esq.
THOMAS BODDINGTON, Esq.
CHARLES CHATFIELD, Esq.
Sir J. BULLER EAST, Bart., D.C.L.
ROBERT ALEX. GRAY, Esq.
CHARLES JELLICOE, Esq.
RALPH LUDLOW LOPES, Esq.
JAMES MURRAY, Esq., C.B., F.R.G.S.
SIR PHILIP ROSE, Esq.
ADMIRAL TINDAL.

AUDITORS.

HENRY ROSE, Esq. | WM. R. BARKER, Esq.

MEDICAL OFFICERS.

JOHN W. OGLE, M.D. | WILLIAM CHOLMELEY, M.D.

ACTUARY AND SECRETARY.

GEORGE HUMPHREYS, Esq., M.A.

	£
Premiums and Interest	**451,296**
Accumulated Funds	**3,000,998**
Also a Subscribed Capital of more than	**1,500,000**

Expenses of Management.—A little over Three per Cent. of the Gross Income.

Married Women's Property Act.—A married woman may effect a Policy of Assurance upon her own life or the life of her husband for her separate use. By this Act a Policy of Assurance effected by any married man on his own life, and expressed on the face of it to be for the benefit of his wife, or children, or any of them, is deemed a trust for the benefit of them according to the interest so expressed, and shall not be subject to the control of the husband or of his creditors.

A Medical Officer is in attendance at the Head Office, at Two o'clock on every Wednesday and Thursday, and at Three o'clock on every Tuesday and Friday, before whom persons whose lives are proposed for insurance may appear. No personal interview with the Directors is required.

The Annual Reports of the Company's state and progress, Prospectuses, and Forms, may be had, or will be sent, Post-free, on application at the Office, or to any of the Company's Agents.

THE ECONOMIC
LIFE ASSURANCE SOCIETY,

No. 6, NEW BRIDGE STREET, BLACKFRIARS, LONDON, E.C.

ESTABLISHED 1823.

Empowered by Act of Parliament, 3 William IV.

DIRECTORS.

HENRY BARNETT, Esq., *Chairman.*

The Rt. Hon. E. PLEYDELL BOUVERIE, *Deputy-Chairman.*

CHARLES ARTHUR BARCLAY, Esq.
MICHAEL BIDDULPH, Esq., M.P.
EDWARD CHARRINGTON, Esq.
Hon. CHAS. D. R. HANBURY-TRACY, M.P.
JOHN HARMAN, Esq.
C. H. W. à COURT REPINGTON, Esq.
GEORGE KETTILBY RICKARDS, Esq.
ALFRED SARTORIS, Esq.
AUGUSTUS KEPPEL STEPHENSON, Esq.
RICHARD TAYLOR, Esq.

AUDITORS.

ALFRED BUCKLEY, Esq.
HUGH MACKAY GORDON, Esq.
JOHN HOWELL, Esq.
JOHN GILLIAM STILWELL, Esq.

Physician.—WM. R. BASHAM, Esq., M.D., 17, Chester Street, Belgrave Square.
Surgeon.—GEO. D. POLLOCK, Esq., F.R.C.S., 36, Grosvenor Street, W.
Solicitor.—CHARLES WARING YOUNG, Esq., 12, Essex Street, Strand.
Secretary.—JOHN RALPH GRIMES, Esq.
Actuary.—RICHARD CHARLES FISHER, Esq.

ADVANTAGES OFFERED BY THE SOCIETY:—

The **lowest** rates of Premium on the **Mutual System**, for young and middle-aged lives, with early participation in Profits.

Security.—Accumulated Fund	**£3,048,000**
Annual Income exceeds	**350,000**
Claims paid, with Bonus Additions	**4,751,991**
Bonuses declared	**2,858,415**

Bonus.—The Society being on the **mutual** principle, the Assured share the **whole of the Profits**, and the Bonuses are allotted on a principle which secures to each Assurer an *increased* share in the profits at each succeeding Division, by which those policies which extend beyond the average duration become exceedingly valuable. The next Division will be made in 1879.

Table of Annual Premiums required for an Assurance of £100 *for the whole Term of Life, with Participation in Profits.*

	£	s.	d.		£	s.	d.
20	1	14	7	35	2	10	11
25	1	19	0	40	2	19	9
30	2	4	3	45	3	11	9

Assurances granted to the extent of **£10,000** on a single life.

Prospectuses, Statement of Accounts, and full particulars may be obtained on application to

JOHN RALPH GRIMES, *Secretary.*

EQUITABLE LIFE ASSURANCE SOCIETY,

OPPOSITE THE MANSION HOUSE, LONDON.

THE OLDEST LIFE OFFICE ON THE MUTUAL PRINCIPLE IN THE WORLD.

Founded A.D. 1762.

BONUS TABLE FOR 1876.

TABLE showing the Amount payable under a Policy for **£1,000** (with its additions), in the event of its becoming a claim after payment of the premium due in the year **1876.**

Policy No.	Policies effected since December 31, 1816.	Sums payable with Additions.	
		£	s.
1 to 164	From 1st Jan. 1817 to 24th April 1817	2837	10
165 to 660	„ 24th April 1817 to 16th April 1818	2757	10
661 to 1019	„ 18th April 1818 to 4th Feb. 1819	2677	10
1021 to 1413	„ 5th Feb. 1819 to 3rd Jan. 1820	2597	10
1415 to 1856	„ 7th Jan. 1820 to 22nd Dec. 1820	2517	10
1857 to 2245	„ 23rd Dec. 1820 to 30th Nov. 1821	2437	10
2247 to 2699	„ 1st Dec. 1821 to 7th Mar. 1823	2357	10
2700 to 3082	„ 7th Mar. 1823 to 24th May 1824	2277	10
3083 to 3349	„ 25th May 1824 to 8th Mar. 1825	2197	10
3350 to 3792	„ 9th Mar. 1825 to 3rd Nov. 1826	2142	10
3794 to 4207	„ 7th Nov. 1826 to 15th July 1828	2087	10
4210 to 4617	„ 21st July 1828 to 1st Mar. 1830	2032	10
4618 to 4973	„ 3rd Mar. 1830 to 24th Nov. 1831	1977	10
4974 to 5328	„ 24th Nov. 1831 to 1st Aug. 1833	1922	10
5329 to 5678	„ 1st Aug. 1833 to 18th June 1835	1867	10
5679 to 6024	„ 19th June 1835 to 21st July 1837	1812	10
6025 to 6360	„ 21st July 1837 to 22nd Jan. 1839	1757	10
6363 to 6727	„ 24th Jan. 1839 to 10th Dec. 1840	1702	10
6730 to 7044	„ 15th Dec. 1840 to 2nd Nov. 1842	1647	10
7045 to 7446	„ 12th Nov. 1842 to 18th June 1845	1612	10
7448 to 7740	„ 19th June 1845 to 2nd Mar. 1847	1577	10
7741 to 7997	„ 3rd Mar. 1847 to 14th Nov. 1848	1542	10
7998 to 8272	„ 14th Nov. 1848 to 19th Nov. 1850	1507	10
8273 to 8586	„ 19th Nov. 1850 to 26th July 1853	1472	10
8587 to 8835	„ 26th July 1853 to 31st Dec. 1855	1437	10
8836 to 8974	„ 1st Jan. 1856 to 31st Dec. 1856	1402	10
8975 to 9102	„ 1st Jan. 1857 to 31st Dec. 1857	1367	10
9103 to 9221	„ 1st Jan. 1858 to 31st Dec. 1858	1332	10
9222 to 9359	„ 1st Jan. 1859 to 31st Dec. 1859	1297	10
9360 to 9463	„ 1st Jan. 1860 to 31st Dec. 1860	1280	0
9464 to 9586	„ 1st Jan. 1861 to 31st Dec. 1861	1262	10
9587 to 9720	„ 1st Jan. 1862 to 31st Dec. 1862	1245	0
9721 to 9819	„ 1st Jan. 1863 to 31st Dec. 1863	1227	10
9820 to 9953	„ 1st Jan. 1864 to 31st Dec. 1864	1210	0
9954 to 10,065	„ 1st Jan. 1865 to 31st Dec. 1865	1175	0
10,066 to 10,154	„ 1st Jan. 1866 to 31st Dec. 1866	1140	0
10,155 to 10,250	„ 1st Jan. 1867 to 31st Dec. 1867	1105	0
10,251 to 10,320	„ 1st Jan. 1868 to 31st Dec. 1868	1070	0
10,321 to 10,454	„ 1st Jan. 1869 to 31st Dec. 1869	1035	0
10,455 to 10,699	„ 1st Jan. 1870 to 31st Dec. 1870	1017	10

The "Equitable" does not allow Commission.

J. WARE STEPHENSON, *Actuary.*

Equity & Law Life Assurance Society,

18, LINCOLN'S INN FIELDS, LONDON, W.C.

CAPITAL ONE MILLION, FULLY SUBSCRIBED.

TRUSTEES.

THE RIGHT HON. VISCT. CARDWELL.
THE RIGHT HON. SIR WILLIAM ERLE.
THE RIGHT HON. SIR JOHN TAYLOR COLERIDGE.
THE HON. THE VICE-CHANCELLOR SIR RICHARD MALINS.
THOMAS GLOVER KENSIT, Esq.
JOHN MOXON CLABON, Esq.
ROBERT JOHN PORCHER BROUGHTON, Esq.

DIRECTORS.

GEORGE LAKE RUSSELL, Esq., *Chairman.*

JOHN MOXON CLABON, Esq., *Deputy Chairman.*

HENRY WILLIAM BIRCH, Esq.
HENRY FOX BRISTOWE, Esq., Q.C.
ROBERT J. P. BROUGHTON, Esq.
THE HON. MR. BARON CLEASBY.
THE HON. MR. JUSTICE DENMAN.
CHARLES J. DIMOND, Esq.
SIMON DUNNING, Esq.
WILLIAM H. DUNSTER, Esq.
ALEX. STAVELEY HILL, Esq., Q.C., D.C.L., M.P.
WILLIAM EDWARD HILLIARD, Esq., Barrister-at-Law.
N. HOLLINGSWORTH, Esq.
JOHN ILIFFE, Esq.
THOMAS GLOVER KENSIT, Esq.
W. BENFORD NELSON, Esq.
FREDERICK PEAKE, Esq.
THE RIGHT HON. SIR R. J. PHILLIMORE.
W. B. S. RACKHAM, Esq.
HENRY CECIL RAIKES, Esq., M.P.
GEORGE ROBINS, Esq.
ALFRED H. SHADWELL, Esq.
HORACE W. SMITH, Esq., M.A.
RICHARD SMITH, Esq.

AUDITORS.

Elected by the Proprietors.
J. BOODLE, Esq.
GEORGE THOMPSON POWELL, Esq.

Elected by the Assured.
A. H. BAILEY, Esq.
LEONARD ROWE VALPY, Esq.

Solicitor.—GEORGE ROOPER, Esq., 17, Lincoln's Inn Fields.

Medical Officer.—R. P. COTTON, M.D., 33, Cavendish Square.

Actuary and Secretary.—G. W. BERRIDGE, Esq.

Policies are indisputable, except on the ground of fraud.

Lapsed Policies are revived within the Period of three months upon payment of the overdue premium and a small fine, *without evidence of health.*

Whole world licences will be granted in most cases without payment of extra premium.

Nine-tenths of the Profits are divided among the Assured every Five Years.

At an Extraordinary General Meeting held on June 9, 1875, the sum of £844,379 was set aside as the value of the Society's liabilities under its Assurance and Annuity Contracts, and £173,180 was ordered to be divided as Bonus; leaving a balance of undivided profit of £20,033.

Nine-tenths of the sum divided was allotted among holders of Policies for 2,500,000.

TABLE of the TOTAL ADDITIONS made up to DECEMBER 31, 1874, to POLICIES of £1,000 each.

Ages at Entry.	Number of Premiums Paid.					
	Thirty.	Twenty-five.	Twenty.	Fifteen.	Ten.	Five.
30	£685 10 0	£549 0 0	£434 10 0	£290 10 0	£175 0 0	£78 10 0
45	841 0 0	678 10 0	533 0 0	353 10 0	211 0 0	93 0 0
60	———	———	787 10 0	517 0 0	310 10 0	137 10 0

GUARDIAN

Fire and Life Assurance Company,

11, LOMBARD STREET, LONDON, E.C.

West-end Office.—4, WHITEHALL, S.W.

Established 1821, *and Empowered by Special Acts of Parliament.*

DIRECTORS.

CHAIRMAN—ARCHIBALD HAMILTON, ESQ.

DEPUTY-CHAIRMAN—G. J. SHAW LEFEVRE, ESQ., M.P.

HENRY HULSE BERENS, ESQ.
HENRY BONHAM-CARTER, ESQ.
CHARLES WILLIAM CURTIS, ESQ.
CHARLES F. DEVAS, ESQ.
FRANCIS HART DYKE, ESQ.
SIR WALTER R. FARQUHAR, BART.
ALBAN G. H. GIBBS, ESQ.
JAMES GOODSON, ESQ.
THOMSON HANKEY, ESQ., M.P.
RICHARD M. HARVEY, ESQ.
RIGHT HON. JOHN G. HUBBARD, M.P.
FREDERICK HALSEY JANSON, ESQ.
BEAUMONT W. LUBBOCK, ESQ.
JOHN B. MARTIN, ESQ.
AUGUSTUS PREVOST, ESQ.
WILLIAM STEVEN, ESQ.
JOHN G. TALBOT, ESQ., M.P.
HENRY VIGNE, ESQ.

AUDITORS.

HERBERT G. H. NORMAN, ESQ.
CORNELIUS PAINE, ESQ.
HENRY SYKES THORNTON, ESQ.
NOEL WHITING, ESQ.

Manager of Fire Department.—F. J. MARSDEN.

Secretary.—T. G. C. BROWNE.

Physician.—J. RUSSELL REYNOLDS, Esq., M.D., F.R.S., 38, Grosvenor Street, W.

Solicitors.—Messrs. PARKIN & PAGDEN, 5, New Square, Lincoln's Inn.

Surveyors.— { JOSEPH JENNINGS, Esq., Langham Street, Cavendish Square.
{ Messrs. DRIVER (Valuers for Landed Securities), 4, Whitehall.

Bankers.— { Messrs. MARTIN & Co., 68, Lombard Street; and
{ Messrs. COUTTS & Co., 59, Strand

Subscribed Capital. £2,000,000 | **Total Invested Funds nearly £3,000,000**
Paid-Up Capital . £1,000,000 | **Total Annual Income exceeds £400,000**

LIFE DEPARTMENT

Participating Policy-holders receive every five years four-fifths of the profits realised.

Trust Policies for Wife and Children issued under the "Married Women's Property Act."

Non-forfeiture Policies issued, so that the assured may be under no apprehension as to inability to pay premiums.

Policies payable during life granted on a very moderate scale of premium.

FIRE DEPARTMENT.

Insurances effected upon nearly every kind of Property at home and abroad.

The Premium on common brick or stone private houses, and the ordinary contents, is only 1*s.* 6*d.* for £100, and on furniture generally, including china, glass, &c., 2*s.* for £100.

The Directors invite attention to the exceptionally good security which this Company offers.

The published Accounts and the Prospectus give the fullest information respecting the state of the Company's affairs, and the terms on which Fire and Life Assurances may be effected.

HAND-IN-HAND

FIRE AND LIFE INSURANCE SOCIETY,

TEMPORARY OFFICES:—

35, NEW BRIDGE ST., BLACKFRIARS, LONDON, E.C.

Instituted in 1696.—*Extended to Life Insurance*, 1836.

DIRECTORS.

The Hon. WILLIAM ASHLEY.
T. PALMER CHAPMAN, Esq.
JOHN LETTSOM ELLIOT, Esq.
Rear-Admiral Sir LEOPOLD G. HEATH, K.C.B.
ANDREW JOHNSTON, Esq.
FREDERICK LOCKER, Esq.
T. FULLER MAITLAND, Esq.
JOHN SPERLING, Esq.
JAMES SYDNEY STOPFORD, Esq.
THOMAS TURNER, Esq.
W. ESDAILE WINTER, Esq.

AUDITORS.

LEOPOLD CUST, Esq. J. LETTSOM ELLIOT, Esq.
CHARLES R. GURNEY HOARE, Esq.

Bankers—Messrs. GOSLINGS and SHARPE, 19, Fleet Street.

Physician—THOMAS K. CHAMBERS, M.D., 24, Mount Street, Grosvenor Square.

Solicitors—Messrs. NICHOLL, NEWMAN, & MANISTY, 8, Howard Street, Strand.

Actuary—JAMES M. TERRY, Esq.

Assistant Actuary—JAMES TERRY, Esq.

The oldest Insurance Office in Existance. Founded and still conducted on the **Mutual System.**

Large Returns made to Members **in each Department.**

The whole of the Profits are divided annually amongst the Members of Five Years' standing and upwards—there being no Shareholders.

The rate of abatement of Premium thereby given for the current year on Life Policies is 65 per cent. for the First Series, and ranges from **55 to 60 per cent.** for the Second Series.

The rate of Bonus return on Septennial Fire Policies (charged at 1*s.* 6*d.* per cent.) **is 66 per cent.**

The Directors are willing to appoint as Agents persons of good position and character.

31st DECEMBER, 1874.

Claims paid on Life Policies to this date	£1,163,197.
Amount of Profits returned ditto	858,152.

ASSETS.

Accumulated Fund	£1,574,118.
Present Value of Life Premiums	1,467,621.

LIABILITIES.

Present Value of Sums Insured (£3,795,765)	£1,870,237.
Present Value of Life Annuities (£7,206 per Ann. and £610 Contingent)	53,198.

The Accounts of the Society may be had on application at the Office.

BENJAMIN BLENKINSOP, *Secretary.*

The Liverpool and London and Globe INSURANCE COMPANY.

Trustees of Company.

T. Brocklebank, Esq., J. Hubback, Esq., J. A. Tobin, Esq., Liverpool.
Sir Charles Nicholson, Bart., D.C.L., H. V. East, Esq., Wm. Nicol, Esq., London.

Trustees of Globe Million Fund.

Sir Charles Nicholson, Bart., D.C.L., Wm. Newmarch, Esq.,
Wm. Nicol, Esq., F.R.S., John W. Robins, Esq., Captain Henry W. Tyler, R.E.

DIRECTORS.

LIVERPOOL BOARD.—OFFICE: No. 1, DALE STREET.

Chairman—Joseph Hubback, Esq.

Deputy Chairmen—H. B. Gilmour, Esq., and A. Castellain, Esq.

Chas. T. Bowring, Esq.	W. D. Holt, Esq.	H. H. Nicholson, Esq.
T. Brocklebank, Esq.	H. Littledale, Esq.	William Paton, Esq.
C. J. Corbally, Esq.	G. H. Loxdale, Esq.	J. Rome, Esq.
Alfred Fletcher, Esq.	Geo. Melly, Esq.	J. A. Tobin, Esq.
Arthur P. Fletcher, Esq.		

Secretary of the Company—Henry Thomson, Esq.

Assistant Secretary—J. M. Dove, Esq.

Auditors—Peter S. Boult, Esq., and Isaac Kitchen, Esq.

Medical Referees—J. R. W. Vose, Esq., M.D., and E. R. Bickersteth, Esq.

Bankers—Bank of Liverpool; Union Bank of London.

Solicitors—Messrs. Laces, Banner, Bird, Newton, and Richardson.

LONDON BOARD.—1, CORNHILL, AND CHARING CROSS.

Chairman—Sir Chas. Nicholson, Bart., D.C.L.

Deputy-Chairman—W. Nicol, Esq.

W. Dent, Esq.	Hon. A. C. Glyn.
Hon. E. Drummond.	W. Macnaughtan, Esq.
Henry V. East, Esq.	Ross D. Mangles, Esq.
Murray Gladstone, Esq.	James Morley, Esq.
R. W. Gaussen, Esq.	G. D. Whatman, Esq.

Actuary of the Company and Resident Secretary—Aug. Hendriks, Esq.

Fire Superintendent—T. Septimus Marks, Esq.

Auditor—H. H. Cannan, Esq.

Medical Referees—J. R. Bennett, Esq., M.D., A. Anderson, Esq., F.R.C.S.

Consulting Surgeon—Sir James Paget, Bart.

Bankers—The London and County Bank; Messrs. Glyn, Mills, Currie, and Co.

Solicitors—Messrs. Palmer, Bull, and Fry.

Surveyors—E. N. Clifton, Esq., and Wm. Thompson, Esq.

At the **ANNUAL MEETING**, held February 24th, 1875, the Report of the Directors for the Year 1874 showed that:—
The Fire Premiums were.....£1,082,521 | The Life Premiums were..... £254,949

The Invested Funds ..... £4,361,837.

THE

LONDON ASSURANCE CORPORATION,

Incorporated by Royal Charter, A.D. 1720.

No. 7, ROYAL EXCHANGE, LONDON, E.C.

ROBERT GILLESPIE, Esq., *Governor.*
EDWARD BUDD, Esq., *Sub-Governor.*
MARK WILKS COLLET, Esq., *Deputy-Governor.*

DIRECTORS.

Hugh G. Arbuthnot, Esq.	Howard Gilliat, Esq.	David Powell, Esq.
Robert Burn Blyth, Esq.	Edwin Gower, Esq.	William Rennie, Esq.
William T. Brand, Esq.	Henry Goschen, Esq.	P. F. Robertson, Esq.
Major-General H. P. Burn.	A. C. Guthrie, Esq.	Robert Ryrie, Esq.
George W. Campbell, Esq.	Louis Huth, Esq.	David P. Sellar, Esq.
G. B. Dewhurst, Esq.	Henry J. B. Kendall, Esq.	Col. Leopold Seymour.
Robert A. B. Dobree, Esq.	Charles Lyall, Esq.	Lewis A. Wallace, Esq.
George L. M. Gibbs, Esq.	Capt. R. W. Pelly, R.N.	William B. Watson, Esq.

Secretary.
JOHN P. LAURENCE, Esq.

Actuary.
ARTHUR H. BAILEY, Esq.

Underwriter.
JOHN ANTHONY RUCKER, Esq.

Manager of the Fire Department.
THOMAS B. BATEMAN, Esq.

Manager of Agencies.
PHILIP SCOONES, Esq.

Physician.
EDWARD CLAPTON, M.D., St. Thomas's Street, Southwark.

Solicitors.
Messrs. JOHNSON, UPTON, & BUDD, 20, Austin Friars.
Messrs. COLLYER-BRISTOW, WITHERS, & RUSSELL, 4, Bedford Row.

West End Agents.
Messrs. GRINDLAY & CO., 55, Parliament Street, S.W.

This Corporation has granted Fire, Life, and Marine Assurances for more than a Century and a half.

The Share Capital is £896,550, of which one-half, or 448,275, has been paid up. The total Funds, on the 31st December, 1873, amounted to £2,816,680.

The printed Accounts of the Corporation, in conformity with the provisions of "The Life Assurance Companies' Act, 1870," may be had on application.

LIFE DEPARTMENT.

Life Assurances may be effected either with or without Participation in Profits.

Loans will be granted on unincumbered Policies that have been in force at least three years, to the extent of their surrender value, provided that such value exceeds £50.

FIRE DEPARTMENT.

Fire Insurances can be effected with the Corporation at moderate rates of Premium.

MARINE DEPARTMENT.

Policies of Marine Insurance are issued at the Head Office, and at Calcutta, Madras, Bombay, Mauritius, Hong Kong, and Shanghai.

JOHN P. LAURENCE, *Secretary.*

THE

LONDON LIFE ASSOCIATION,

81, KING WILLIAM STREET, LONDON, E.C.

ESTABLISHED 1806.

President—ALFRED HEAD, Esq.
Vice-President—JOHN COSTEKER, Esq.

Trustees.

FRANCIS HENRY MITCHELL, Esq. | GEORGE FRED. POLLOCK, Esq.
JAMES EWING MATHIESON, Esq. | GEORGE HANBURY, Esq.

Directors.

JOHN BAGGALLAY, Esq. | GABRIEL GOLDNEY, Esq., M.P.
MARK CATTLEY, Esq. | HENRY S. KING, Esq.
GORDON WYATT CLARK, Esq. | JOS. JOHNSON MILES, Esq.
CHAS. M. CLODE, Esq. | ROBERT POTT, Esq.
WILLIAM CORRIE, Esq. | S. W. SILVER, Esq.
THOMAS DEVAS, Esq. | ROBERT OWEN WHITE, Esq.

Policies now in Force	**£8,150,000**
Fund accumulated and invested in First Class Securities upwards of	**3,200,000**
Policy Claims Paid	**6,600,000**

The ASSOCIATION employs NO AGENTS, and pays NO COMMISSION in any shape, for the introduction of Policies.

Its expenses are small, being about 2½ per cent. of its gross income, or 3½ per cent. of its Premium income.

An investigation of its affairs is made every year, and the surplus is applied solely to the reduction of the Premiums, such reduction commencing with the eighth payment.

During the last 30 years the reduction has *increased*, on an average, at the rate of about One per cent. per annum; and as the mortality among its Members continues to be much within the estimate, and the funds of the Society are invested at a higher rate of interest than is assumed in the valuations, it is expected that the Premiums may be still further reduced.

Premiums commenced before		Jan., 1856 (1st Series),	this year will be reduced 94½ per cent.
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The following Extract from the "Seventeenth Annual Report" (year ending 31st December, 1874) will show the ample character of the Security offered.

THE FUNDS OF THE COMPANY STAND AS FOLLOWS:—

CAPITAL PAID UP	£179,835
LIFE ASSURANCE ACCUMULATION FUND	204,048
ANNUITY FUND	7,471
RESERVE FUND AND SUSPENSE ACCOUNT	180,000

LIFE BRANCH.

Extract from the Report on the Company's Life Branch, dated 6th May, 1874, by SAMUEL BROWN, Esq., late President of the Institute of Actuaries:—

"The *precautions* which have been taken *not to anticipate* any of the future Profits of the Company, and by using the Tables on which the Premiums are based, at a *very low rate of Interest*, to strengthen its position at all *future divisions*, are sure to lead to the *confidence and support* of the Public."

The Amount at the Credit of the Life Fund exceeds 63 per cent. of the entire Nett Premiums received on every Policy now in existence.

Careful Selection of Lives and consequent Large Bonuses.

The Company has paid, in satisfaction of Claims, £1,558,535.

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THE

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Office—No. 5, WHITEHALL, LONDON, S.W.

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Further Empowered by Special Act of Parliament, 14 and 15 Vict., cap. 130.

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The business of this Company consists in the PURCHASE of, or LOANS upon—
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Membership consists in the payment of an annual Guinea, or of Ten Guineas in one sum. Subscribers are entitled to vote for Annuities in the proportion of one Vote for each Annual Half-Guinea not in arrear, and for each Donation of Five Guineas. Subscriptions are due on the 1st of January, and can always be remitted by Post-Office Order, or by a Cheque crossed 'Sir S. Scott & Co.'

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The last Annual Report and last Valuation Schedule can be obtained upon application.

HENRY HARBEN, *Resident Director.*
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ROCK LIFE ASSURANCE COMPANY.

ESTABLISHED A.D. 1806.

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	£	s.	d.
Viz., on the 20th August, 1875	3,167,289	2	9
Sum Assured—Inclusive of Bonus Additions—at that date	4,893,272	6	4
Estimated Liability thereon (Northampton Table of Mortality, 3 per Cent. Interest).	1,451,708	14	6
Being less than one-half the Fund invested.			
Total Amount of Bonus Additions made to Policies	3,251,871	3	9
Amount of Profits divided for the Seven Years ending 20th August, 1875	535,216	16	0
Annual Income	286,500	9	1
Total Claims paid—Inclusive of Bonus Additions	7,893,697	1	8

*** Copies of the Accounts deposited with the Board of Trade, pursuant to "The Life Assurance Companies' Act, 1870," as well as of the Periodical Valuation Accounts, and every information may be obtained on application.

H. W. PORTER, *Actuary.*

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Assurers in England can obtain advances in connection with their Policies.

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